Volume Contents 2001

NUMBER 1

Contents

v Contributors to this issue

vii Graphical abstracts

TETRAHEDRON: ASYMMETRY REPORT NUMBER 50

J. Eames and N. Weerasooriya — 1 — Recent advances into the enantioselective protonation of prostereogenic enol derivatives

COMMUNICATIONS

G. P. Aguado, A. Alvarez-Larena, O. Illa, A. G. Moglioni and R. M. Ortuño — 25 — On the stereoselective hydrogenation of chiral cyclobutyl dehydro-amino acid derivatives: influence of the catalyst in the π-facial diastereoselection

W.-W. Lee, H. Jung Shin and S. Chang — 29 — A rapid formal synthesis of the macrolide (−)-A26771B

J. Kang, J. H. Lee and J. S. Choi — 33 — Preparation of a new FerroPHOS derivative for palladium-catalyzed asymmetric allylic alkylations

K. Hiroi, Y. Suzuki, F. Kato and Y. Kyo — 37 — Stereochemistry of transition metal catalyzed asymmetric intramolecular allyl transfer in chiral α-sulfinyl allylic esters

S. F. Mayer, A. Steinreiber, R. V. A. Orru and K. Faber — 41 — An enzyme-triggered enantio-convergent cascade-reaction

I-P. Fu and B.-J. Uang — 45 — Enantioselective borane reduction of aromatic ketones catalyzed by chiral aluminum alkoxides

M. Calmès, C. Glot and J. Martinez — 49 — Investigation into the enantioselective protonation of enolate Schiff bases with (*R*)-pantolactone

ARTICLES

J. S. Yadav, S. Nanda and A. Bhaskar Rao — 53 — Design and synthesis of useful intermediates for novel lipoxygenase substrates through enzymatic resolution

S. Nakano, Y. Igarashi and H. Nohira — 59 — Lipase-mediated kinetic resolution of *cis*-1,2-indandiol and the Ritter reaction of its mono-acetate

J. S. Yadav, P. Thirupathi Reddy, S. Nanda and A. Bhaskar Rao — 63 — A facile synthesis of (*R*)-(−)-2-azido-1-arylethanols from 2-azido-1-aryl-ketones using baker's yeast

C. Anaya de Parrodi, A. Clara-Sosa, L. Pérez, L. Quintero, V. Marañón, R. A. Toscano, J. A. Aviña, S. Rojas-Lima and E. Juaristi — 69 — Highly diastereoselective alkylation, acylation and aldol condensation of *cis*- and *trans*-(*N*-acyloyl)hexahydrobenzoxazolidin-2-ones

H. Cousin, P. Cardinael, H. Oulyadi, X. Pannecoucke and J. C. Combret — 81 — Synthesis of the three isomeric mono-2-, 3-, or 6-hydroxy permethylated β-cyclodextrins and unambiguous high field NMR characterisation

Z. Sánta, L. Párkányi, I. Németh, J. Nagy and J. Nyitrai — 89 — Synthesis of pure methyl [(2*S*,3*R*,α*R*)-1-(3-bromo-4-methoxyphenyl)-3-(α-acetoxy)ethyl-4-oxoazetidin-2-carboxylate] and its enantiomer

Z. Liu, W. Z. Li and Y. Li — 95 — Enantioselective total synthesis of (+)-3,4-epoxycembrene-A

R. P. Frutos, S. Stehle, L. Nummy and N. Yee — 101 — An improved synthesis of *N*-aryl-hydantoin LFA-1 antagonists via the enantiospecific alkylation of an isobutyraldehyde-derived imidazolidinone template

S. Gedey, A. Liljeblad, L. Lázár, F. Fülöp and L. T. Kanerva — 105 — Preparation of highly enantiopure β-amino esters by *Candida antarctica* lipase A

M. Achmatowicz and J. Jurczak — 111 — The synthesis of L-proline derived tetraazamacrocyclic ligands of C_2 symmetry via intramolecular ester aminolysis

W. Adam, P. Bheema Rao, H.-G. Degen and C. R. Saha-Möller — 121 — Asymmetric Weitz–Scheffer epoxidation of conformationally flexible and fixed enones with sterically demanding hydroperoxides mediated by optically active phase-transfer catalysts

M. Chadim, M. Buděšínský, J. Hodačová, J. Závada and P. C. Junk — 127 — (3+3)-Cyclocondensation of the enantiopure and racemic forms of *trans*-1,2-diaminocyclohexane with terephthaldehyde. Formation of diastereomeric molecular triangles and their stereoselective solid-state stacking into microporous chiral columns

J. M. Vega-Pérez, M. Vega, E. Blanco and F. Iglesias-Guerra — 135 — Stereoselective synthesis of oxazolidines from 2-amino-2-deoxy-D-allose derivatives and their reactivity with nucleophiles

C. Mellin-Morlière, D. J. Aitken, S. D. Bull, S. G. Davies and H.-P. Husson — 149 — A practical asymmetric synthesis of homochiral α-arylglycines

R. J. Smith, M. Pietzsch, T. Waniek, C. Syldatk and S. Bienz — 157 — Enzymatic synthesis of enantiomerically enriched D- and L-3-silylated alanines by deracemization of DL-5-silylmethylated hydantoins

C. Mauger, S. Masson, M. Vazeux, J.-F. Saint-Clair, W. H. Midura, J. Drabowicz and M. Mikolajczyk — 167 — Synthesis, characterization and resolution of racemic (2-methylsulfinyl)-phenylphosphonic acid methyl ester via its cinchoninium salts

175 — Corrigendum

A1 — Stereochemistry abstracts

I — Instructions to contributors

VII — Cumulative author index

NUMBER 2

Contents

v — Contributors to this issue

vii — Graphical abstracts

COMMUNICATIONS

Y.-F. Chang and D.-F. Tai — 177 — Enhancement of the enantioselectivity of lipase OF catalyzed hydrolysis

G. Guillena and C. Nájera — 181 — The imine (+)-pseudoephedrine glycinamide: a useful reagent for the asymmetric synthesis of (*R*)-α-amino acids

C. Lacaze-Dufaure, G. Lenoble, M. Urrutigoïty, J.-P. Gorrichon, C. Mijoule and P. Kalck — 185 — NMR and density functional studies of the stereoselective palladium catalyzed cyclocarbonylation of (1*R*,4*R*)-isolimonene

A. García Martínez, E. Teso Vilar, A. García Fraile, S. de la Moya Cerero and B. Lora Maroto — 189 — A novel route to enantiopure cyclopentene carboxylic acids based on 3-*endo*-bromocamphor

S. Ma, Z. Shi and S. Wu — 193 — Enantioselective synthesis of β-arylbutenolides via palladium(0) catalysed asymmetric coupling cyclisation reaction of racemic allenic carboxylic acids with aryl iodides

ARTICLES

X. Yao, M. Qiu, W. Lü, H. Chen and Z. Zheng — 197 — Substituted salen–Ru(II) complexes as catalysts in the asymmetric cyclopropanation of styrene by ethyl diazoacetate: the influence of substituents and achiral additives on activity and enantioselectivity

R. K. Boeckman, Jr., M. A. Laci and A. T. Johnson — 205 — Toward the development of a general chiral auxiliary. Part 6: Structural effects on diastereoselection using camphor derived lactams: evaluation of (1*R*,4*S*)-1,7,7-trimethyl-3-azabicyclo[2.2.1]hept-5-en-3-one as a chiral controller

P. López-Serrano, J. A. Jongejan, F. van Rantwijk and R. A. Sheldon	219	Enantioselective acylation of α-aminonitriles catalysed by *Candida antarctica* lipase. An unexpected turnover-related racemisation
Z.-L. Wei, Z.-Y. Li and G.-Q. Lin	229	Baker's yeast mediated mono-reduction of 1,3-cyclohexanediones bearing two identical C(2) substituents
P. López-Serrano, M. A. Wegman, F. van Rantwijk and R. A. Sheldon	235	Enantioselective enzyme catalysed ammoniolysis of amino acid derivatives. Effect of temperature
V. Santes, E. Gómez, V. Zárate, R. Santillan, N. Farfán and S. Rojas-Lima	241	Synthesis of new homochiral 2,3-dialkylpiperazines derived from (*R*)-(−)-phenylglycinol
K. Khumtaveeporn, A. Ullmann, K. Matsumoto, B. G. Davis and J. B. Jones	249	Expanding the utility of proteases in synthesis: broadening the substrate acceptance in non-coded amide bond formation using chemically modified mutants of subtilisin
N. G. Andersen, R. McDonald and B. A. Keay	263	Synthesis, resolution and application of 2,2′-bis(di-2-furylphosphino)-1,1′-binaphthalene
G. Guanti, L. Banfi, K. Powles, M. Rasparini, C. Scolastico and N. Fossati	271	Asymmetric synthesis of (*R*)-(−)-chlozolinate through a chemoenzymatic procedure
F. Effenberger and S. Oßwald	279	Enantioselective hydrolysis of (*RS*)-2-fluoroarylacetonitriles using nitrilase from *Arabidopsis thaliana*
T. Mino, K. Kashihara and M. Yamashita	287	New chiral phosphine–amide ligands in palladium-catalysed asymmetric allylic alkylations
I. Izquierdo, M. T. Plaza, M. Rodríguez, J. A. Tamayo and A. Martos	293	Lipase mediated resolution of 1,3-butanediol derivatives: chiral building blocks for pheromone enantiosynthesis. Part 3
M. Tori, C. Makino, K. Hisazumi, M. Sono and K. Nakashima	301	Synthesis of a homochiral ketone having a pinguisane skeleton using phenylethylamine as a chiral auxiliary: a formal total synthesis of deoxopinguisone
Y. Kawai, Y. Inaba and N. Tokitoh	309	Asymmetric reduction of nitroalkenes with baker's yeast
N. S. Goulioukina, T. M. Dolgina, I. P. Beletskaya, J.-C. Henry, D. Lavergne, V. Ratovelomanana-Vidal and J.-P. Genet	319	A practical synthetic approach to chiral α-aryl substituted ethylphosphonates
C. Bied, J. J. E. Moreau and M. Wong Chi Man	329	Chiral amino-urea derivatives of (1*R*,2*R*)-1,2-diaminocyclohexane as ligands in the ruthenium catalysed asymmetric reduction of aromatic ketones by hydride transfer
D. Gueyrard, O. Leoni, S. Palmieri and P. Rollin	337	A new and rapid access to homochiral 2,3-dihydro-oxazolo[2,3-*b*]quinazolin-5-ones
B. Koop, A. Straub and H. J. Schäfer	341	Stereoselective oxidation of 4-aryl-1,4-dihydropyridines to axially chiral 4-arylpyridines with 2,2,6,6-tetramethyl-1-oxopiperidinium tetrafluoroborate ($TEMPO^{+}BF_4^{-}$)
J. M. Andrés, M. A. Martínez, R. Pedrosa and A. Pérez-Encabo	347	Stereoselective cyanation of chiral α-amino aldehydes by reaction with Nagata's reagent: a route to enantiopure β-amino-α-hydroxy acids
	355	Corrigendum
	A33	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 3

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

J. L. Terán, D. Gnecco, A. Galindo, J. Juárez, S. Bernès and R. G. Enriquez — 357 New methodology for the synthesis of enantiopure (3*R*,2a*R*)-(−)-3-phenylhexahydro-oxazolo[3,2-*a*]-pyridin-5-one: a synthesis of (*S*)-(+)-coniine

V. J. Jasys and F. J. Urban — 361 Observation of a new dimeric amino acid derivative in the reaction of methyl *N*-BOC-(*S*)-(3-fluorophenyl)alanate with DIBAL-H and lithio ethyl propiolate

F. Fernández, X. García-Mera and J. E. Rodríguez-Borges — 365 A convenient route to both enantiomers of *endo*-2-benzonorbornenol via lipase catalysed resolution of the racemic mixture

ARTICLES

H. Idogaki, N. Kasai, M. Takeuchi, M. Hatada and T. Suzuki — 369 Preparation of (*R*)- and (*S*)-4-chloro-3-acetoxybutyronitrile using microbial resolution

T. Hirose, K. Naito, H. Shitara, H. Nohira and B. W. Baldwin — 375 ^{1}H NMR study of chiral recognition of amines by chiral Kemp's acid diamide

Q. Xu, G. Wang, X. Pan and A. S. C. Chan — 381 The synthesis of new optically active 2-methylquinoline derivatives and their application in the enantioselective addition of diethylzinc to aldehydes

J. Song and R. I. Hollingsworth — 387 Homochiral 4-hydroxy-5-hexenoic acids and their derivatives and homologues from carbohydrates

S. Krikstolaityté, A. Sackus, C. Rommimg and K. Undheim — 393 Stereoselectivity in the construction of rigidified homoserine analogues

G. Zhao, X.-G. Li and X.-R. Wang — 399 Enantioselective additions of diphenylzinc to aldehydes using chiral pyrrolidinylmethanol derivatives as catalysts

A. Kamal and G. B. Ramesh Khanna — 405 A facile preparation of (±)-β-hydroxy nitriles and their enzymatic resolution with lipases

M. L. Heredia, M. Fernández, E. de la Cuesta and C. Avendaño — 411 1-Bromo-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-diones as α-bromoglycine templates

L. T. Liu, P.-C. Hong, H.-L. Huang, S.-F. Chen, C.-L. J. Wang and Y.-S. Wen — 419 Asymmetric syntheses of *trans*-3,4-disubstituted 2-piperidinones and piperidines

A. E. Wróblewski and K. B. Balcerzak — 427 Synthesis of 2-amino-1,3-dihydroxypropylphosphonates from Garner aldehyde

R. I. Kureshy, N. H. Khan, S. H. R. Abdi, S. T. Patel and R. V. Jasra — 433 Enantioselective epoxidation of non-functionalised alkenes using a urea–hydrogen peroxide oxidant and a dimeric homochiral Mn(III)-Schiff base complex catalyst

A. Bongini, M. Panunzio, E. Bandini, E. Campana, G. Martelli and G. Spunta — 439 Synthesis of perhydroxazin-4-ones. Competitive Mukaiyama versus hetero Diels–Alder reaction in the cycloaddition of 2-aza-3-trimethylsilyloxy-1,3-butadiene and aldehydes

K. Krajewski, Z. Ciunik and I. Z. Siemion — 455 Stereoisomers of 4-amino-3-hydroxy-1-cyclohexanecarboxylic acid and 4-amino-3-oxo-1-cyclohexanecarboxylic acid as mimetics of a twisted *cis*-amide bond

K. Okamoto, T. Kimachi, T. Ibuka and Y. Takemoto — 463 The role of the planar chirality of iron tricarbonyl substituted homochiral amino alcohols in the asymmetric alkylation of aldehydes with diethylzinc

A. Agócs, T. E. Gunda, G. Batta, Á. Kovács-Kulyassa and P. Herczegh — 469 Cycloaddition reactions of carbohydrate derivatives. Part 8: Intramolecular cycloaddition of nitrilimines derived from sugars

U. Maitra, V. Kumar Potluri, N. M. Sangeetha, P. Babu and A. R. Raju — 477 — Helical aggregates from a chiral organogelator

Y. N. Belokon, K. A. Kochetkov, N. S. Ikonnikov, T. V. Strelkova, S. R. Harutyunyan and A. S. Saghiyan — 481 — A new synthesis of enantiomerically pure *syn*-(*S*)-β-hydroxy-α-amino acids via asymmetric aldol reactions of aldehydes with a homochiral Ni(II)-glycine (*S*)-BPB Schiff base complex

M. Achmatowicz and J. Jurczak — 487 — The synthesis of L-proline derived hexaazamacrocyclic ligands of C_3 symmetry via intramolecular methyl ester aminolysis

H. Brunner, H. B. Kagan and G. Kreutzer — 497 — Asymmetric catalysis. Part 137: Nickel catalysed enantioselective α-ketol rearrangement of 1-benzoylcycloalkanols

R. Gandolfi, R. Gualandris, C. Zanchi and F. Molinari — 501 — Resolution of (*RS*)-2-phenylpropanoic acid by enantioselective esterification with dry microbial cells in organic solvent

F. Benedetti, C. Forzato, P. Nitti, G. Pitacco, E. Valentin and M. Vicario — 505 — Synthesis of all stereoisomers of cognac lactones via microbial reduction and enzymatic resolution strategies

V. Gotor, F. Rebolledo and R. Liz — 513 — Enantioselective bioreduction of β-keto sulfones with the fungus *Curvularia lunata*

W. Wang, A. J. Pearce, Y. Zhang and P. Sinaÿ — 517 — Diisobutylaluminium-promoted regioselective de-*O*-methylation of cyclodextrins: an expeditious entry to selectively modified cyclodextrins

M. I. Monterde, R. Brieva and V. Gotor — 525 — Stereocontrolled chemoenzymatic synthesis of 2,3-disubstituted piperidines

A65 — Stereochemistry abstracts

I — Instructions to contributors

VII — Cumulative author index

NUMBER 4

Contents

v — Contributors to this issue

vii — Graphical abstracts

COMMUNICATIONS

X.-W. Wu, X.-L. Hou, L.-X. Dai, J. Tao, B.-X. Cao and J. Sun — 529 — Synthesis of novel *N,O*-planar chiral [2.2]paracyclophane ligands and their application as catalysts in the addition of diethylzinc to aldehydes

A. Klys, J. Zakrzewski, A. Rybarczyk-Pirek and T. A. Olszak — 533 — Resolution and determination of the absolute configuration of 3,3′4,4′-tetramethyl-1,1′-diphosphaferrocene-2-carboxylic acid

A. Armstrong, M. A. Atkin and S. Swallow — 535 — Asymmetric electrophilic amination of enolates by a chiral *N*-alkoxycarbonyloxaziridine

ARTICLES

G. V. M. Sharma, A. S. Chander and P. R. Krishna — 539 — Pd(II)-mediated synthesis of 2-deoxy- and rare-*C*-glycosides

A. M. F. Liu, N. A. Somers, R. J. Kazlauskas, T. S. Brush, F. Zocher, M. M. Enzelberger, U. T. Bornscheuer, G. P. Horsman, A. Mezzetti, C. Schmidt-Dannert and R. D. Schmid — 545 — Mapping the substrate selectivity of new hydrolases using colorimetric screening: lipases from *Bacillus thermocatenulatus* and *Ophiostoma piliferum*, esterases from *Pseudomonas fluorescens* and *Streptomyces diastatochromogenes*

A. A. M. Lapis, O. C. Kreutz, A. R. Pohlmann and V. E. U. Costa — 557 — An efficient synthesis of enantiopure (+)- and (−)-3-*exo*-amino-7,7-dimethoxynorbornan-2-*exo*-ols

G. Cardillo, L. Gentilucci, M. Gianotti and A. Tolomelli — 563 — Asymmetric synthesis of 5-isopropyl-oxazoline-4-imide as *syn*-hydroxyleucine precursor

Z. Guo, A. Goswami, V. B. Nanduri and R. N. Patel — 571 — Asymmetric acyloin condensation catalysed by phenylpyruvate decarboxylase. Part 2: Substrate specificity and purification of the enzyme

R. A. Schenato, È. M. dos Santos, B. S. M. Tenius, P. R. R. Costa, I. Caracelli and J. Zukerman-Schpector — 579 — A practical and efficient preparation of (−)-(4a*S*,5*R*)-4,4a,5,6,7,8-hexahydro-4a,5-dimethyl-2(3*H*)-naphthalenone: a key intermediate in the synthesis of (−)-dehydrofukinone

M. Kawasaki, M. Goto, S. Kawabata and T. Kometani — 585 — The effect of vinyl esters on the enantioselectivity of the lipase-catalysed transesterification of alcohols

G. Enierga, M. Espiritu, P. Perlmutter, N. Pham, M. Rose, S. Sjöberg, N. Thienthong and K. Wong — 597 — Intramolecular amidomercurations under allylic control: a stereoselective synthesis of (+)-pseudohygroline and (+)-3-hydroxypyrrolizidine

G. Guanti and R. Riva — 605 — Synthesis of chiral non-racemic azetidines by lipase-catalysed acetylations and their transformation into amino alcohols: precursors of chiral catalysts

G. Adembri, M. L. Paoli, P. Rossi and A. Sega — 619 — Synthesis of enantiopure bis-isoxazolines from (4*R*)-(+)-4-acetoxycyclopent-2-enone

J. Kámán, J. Van der Eycken, A. Péter and F. Fülöp — 625 — Enzymatic resolution of bicyclic 1,3-amino alcohols in organic media

A. Suárez, A. Pizzano, I. Fernández and N. Khiar — 633 — Monodentate phosphites with carbohydrate substituents and their application in rhodium catalysed asymmetric hydrosilylation reactions

E. Forró, J. Árva and F. Fülöp — 643 — Preparation of (1*R*,8*S*)- and (1*S*,8*R*)-9-azabicyclo[6.2.0]dec-4-en-10-one: potential starting compounds for the synthesis of anatoxin-*a*

M. Diéguez, O. Pàmies, G. Net, A. Ruiz and C. Claver — 651 — Furanoside diphosphines derived from D-(+)-xylose and D-(+)-glucose as ligands in rhodium-catalysed asymmetric hydroformylation reactions

D. Saylik, E. M. Campi, A. C. Donohue, W. R. Jackson and A. J. Robinson — 657 — A new enantioselective synthesis of β-amino acids

J. Yamazaki, T. Watanabe and K. Tanaka — 669 — Enantioselective synthesis of allenecarboxylates from phenyl acetates through C–C bond forming reactions

Á. Cantín, C. Lull, J. Primo, M. A. Miranda and E. Primo-Yúfera — 677 — Isolation, structural assignment and insecticidal activity of (−)-(1*S*,2*R*,3*R*,4*S*)-1,2-epoxy-1-methyl-4-(1-methylethyl)-cyclohex-3-yl acetate, a natural product from *Minthostachys tomentosa*

D. Basavaiah, G. J. Reddy and V. Chandrashekar — 685 — A novel and effective chiral phosphoramide catalyst for the borane-mediated asymmetric reduction of prochiral α-halo ketones

A109 — Stereochemistry abstracts

I — Instructions to contributors

VII — Cumulative author index

NUMBER 5

Contents

v — Contributors to this issue

vii — Graphical abstracts

COMMUNICATIONS

N. W. Fadnavis, M. Sharfuddin and S. K. Vadivel — 691 — Porcine pancreatic lipase mediated regio- and stereoselective hydrolysis: chemoenzymatic synthesis of (2*S*,3*S*)-2-amino-3,4-dihydroxybutyric acid

J. Clayden, L. W. Lai and M. Helliwell — 695 — Using amide conformation to 'project' the stereochemistry of an (−)-ephedrine-derived oxazolidine: a pair of pseudoenantiomeric chiral amido-phosphine ligands

J. Casas, C. Nájera, J. M. Sansano, J. González, J. M. Saá and M. Vega	699	Enantioselective synthesis of (*S*)-α-methylphenylalanine using (*S*)-BINOLAMs as new phase-transfer catalysts
M. E. B. Smith, M. C. Lloyd, N. Derrien, R. C. Lloyd, S. J. C. Taylor, D. A. Chaplin, G. Casy and R. McCague	703	An efficient route to all eight stereoisomers of a tri-functionalised cyclopentane scaffold for drug discovery
G. Cravotto, G. M. Nano, G. Palmisano and S. Tagliapietra	707	An asymmetric approach to coumarin anticoagulants via hetero-Diels–Alder cycloaddition
		ARTICLES
A. Cruz, A. Vásquez-Badillo, I. Ramos-García and R. Contreras	711	A stereochemical study of optically active thiazolidines
J. Bálint, I. Markovits, G. Egri, Z. Tuza, L. Párkányi and E. Fogassy	719	Synthesis, resolution and absolute configuration of a tolperisone metabolite
Y. Wang and D. Ma	725	Synthesis of enantiopure *N*-protected 4,5-disubstituted 3-pyrrolidinones and *N*-protected 2,5-disubstituted 3-pyrrolidinones via the Dieckmann reaction of dicarbonyl compounds derived from enantiopure β-amino esters
L. Somsák, K. Czifrák, T. Deim, L. Szilágyi and A. Bényei	731	Studies into the preparation of 1-deoxy-1-thiocyanato-D-glycopyranosyl cyanides and the anomeric effect of the thiocyanate group
M. Sarfati, C. Aroulanda, J. Courtieu and P. Lesot	737	Enantiomeric recognition of chiral invertomers through NMR in chiral oriented phases: a study of *cis*-decalin
J. Varga, D. Szabó, C. P. Sár and I. Kapovits	745	Stereospecific synthesis and hydrolysis of optically active diaryl(acylamino)-(acyloxy)spiro-λ^4-sulfanes and related cyclic diaryl(acylamino)sulfonium salts
F. Lake and C. Moberg	755	Ti-mediated addition of diethylzinc to benzaldehyde. The effect of chiral additives
A. Debache, S. Collet, P. Bauchat, D. Danion, L. Euzenat, A. Hercouet and B. Carboni	761	Belokon's Ni(II) complex as a chiral masked glycine for the diastereoselective synthesis of 2-substituted 1-aminocyclopropane carboxylic acids
M. Nour, K. Tan, R. Jankowski and C. Cavé	765	Easy access to optically active Hagemann's esters
R. Liu and H.-E. Högberg	771	Chemoenzymatic preparation of (2*S*,3*S*)- and (2*R*,3*R*)-2,3-butanediols and their esters from mixtures of *d,l*- and *meso*-diols
C. André, P. Spangenberg, E. Gentil and C. Rabiller	779	In situ ^{19}F NMR spectroscopy study of enzymatic transglycosylation reactions using α-D-aldohexopyranosyl fluorides as donors and acceptors
S. M. O. Van Dyck, G. L. F. Lemière, T. H. M. Jonckers, R. Dommisse, L. Pieters and V. Buss	785	Kinetic resolution of a dihydrobenzofuran-type neolignan by lipase-catalysed acetylation
T. Kumamoto, N. Aoyama, S. Nakano, T. Ishikawa and S. Narimatsu	791	Synthesis of enantiomeric 4-hydroxypropranolols from 1,4-dihydroxynaphthalene
T. Polonski, M. Szyrszyng, M. Gdaniec, E. Nowak and A. Herman	797	Absolute sense of twist of the benzil molecule in its enantiomorphous crystals and inclusion complexes with optically active hosts
M. Yus, T. Soler and F. Foubelo	801	Synthesis of functionalised enantiopure steroids from estrone and cholestanone through organolithium intermediates
A. Rolland, D. Hérault, F. Touchard, C. Saluzzo, R. Duval and M. Lemaire	811	Enantiopure poly(glycidyl methacrylate-*co*-ethylene glycol dimethacrylate): a new material for supported catalytic asymmetric hydrogen transfer reduction
	A135	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 6

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATION
Y. Banba, C. Abe, H. Nemoto, A. Kato, I. Adachi and H. Takahata	817	Asymmetric synthesis of fagomine and its congeners
		ARTICLES
M. J. O'Donnell, F. Delgado, E. Domínguez, J. de Blas and W. L. Scott	821	Enantioselective solution- and solid-phase synthesis of glutamic acid derivatives via Michael addition reactions
P. Radha Krishna, V. Kannan, A. Hangovan and G. V. M. Sharma	829	Asymmetric Baylis–Hillman reaction using sugar acrylates—synthesis of optically active α-methylene-β-hydroxy alkanoates
W. Matsuda-Sentou and T. Shinmyozu	839	Resolution and chiroptical properties of [3$_3$](1,4)barrelenophanedicarbonitrile
S. Han, P. Chen, G. Lin, H. Huang and Z. Li	843	(*R*)-*Oxynitrilase*-catalyzed hydrocyanation: the first synthesis of optically active fluorinated mandelonitriles
E. P. Siqueira Filho, J. A. R. Rodrigues and P. J. S. Moran	847	Baker's yeast reduction of α-methyleneketones
S. Ferorelli, C. Franchini, F. Loiodice, M. G. Perrone, A. Scilimati, M. S. Sinicropi and P. Tortorella	853	Lipase-mediated kinetic resolution of rigid clofibrate analogues with lipid-modifying activity
P. Dupau, A.-E. Hay, C. Bruneau and P. H. Dixneuf	863	Synthesis of optically active 2-aminotetraline derivatives via enantioselective ruthenium-catalyzed hydrogenation of ene carbamates
D. Crestia, C. Guérard, H. Veschambre, L. Hecquet, C. Demuynck and J. Bolte	869	Chemoenzymatic synthesis of chiral substituted acrylate and acrylonitrile precursors for the synthesis of 3-deoxy-2-ulosonic acids and α-methylene-γ-lactones
D. M. Hodgson and M. Petroliagi	877	Rh(II)-binaphthol phosphate catalysts in the enantioselective intramolecular oxonium ylide formation–[3,2] sigmatropic rearrangement of α-diazo-β-ketoesters
A. Solladié-Cavallo, L. Jierry, L. Bouérat and P. Taillasson	883	Tri- and tetrasubstituted α-fluorocyclohexanones with enantiomeric excesses in the range of 97–100%
S. A. Said and A. Fiksdahl	893	Formation of chiral aryl ethers from enantiopure amine or alcohol substrates
K. Nakazawa, M. Hayashi, M. Tanaka, M. Aso and H. Suemune	897	Introduction of a quaternary stereogenic center to oxindole using cholinesterase-catalyzed asymmetric hydrolysis
O. K. Choi and B. T. Cho	903	A convenient synthesis of (1*S*,2*R*)-1,2-indene oxide and *trans*-(1*S*,2*S*)-2-bromo-1-indanol via oxazaborolidine-catalyzed borane reduction
S. Demay, M. Lotz, K. Polborn and P. Knochel	909	Preparation of a rigid bicyclic diphosphine by radical cyclisation
E. M. Brun, S. Gil and M. Parra	915	Enantioselective α-alkylation of unsaturated carboxylic acids using a chiral lithium amide
J. C. Anderson, R. J. Cubbon and J. D. Harling	923	Investigation of the importance of nitrogen substituents in a N–P chiral ligand for enantioselective allylic alkylation
A. J. Pihko, K. C. Nicolaou and A. M. P. Koskinen	937	An expedient synthesis of D-callipeltose
I. Uemura, K. Yamada, K. Sugiura, H. Miyagawa and T. Ueno	943	Efficient stereoselective synthesis of a 1-hydroxymethyl-2-methylglycidol derivative
A. Avenoza, C. Cativiela, F. Corzana, J. M. Peregrina, D. Sucunza and M. M. Zurbano	949	Enantioselective synthesis of (*S*)- and (*R*)-α-methylserines: application to the synthesis of (*S*)- and (*R*)-*N*-Boc-*N*,*O*-isopropylidene-α-methylserinals

A. Soriente, M. De Rosa, M. Stanzione, R. Villano and A. Scettri	959	An efficient asymmetric aldol reaction of Chan's diene promoted by chiral Ti(IV)–BINOL complex
	965	Corrigendum
	A165	Stereochemistry abstracts
	I	Instructions to contributors
	V	Cumulative author index

NUMBER 7

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATIONS
A. Solladié-Cavallo, L. M. Martin-Cabrejas, G. Caravatti and M. Lang	967	Synthesis of (+)-(*R*)-methyl 2-aminotetraline-2-carboxylate: the hydroxypinanone method versus the bislactim method
P. J. Gerrits, J. Marcus, L. Birikaki and A. van der Gen	971	Difficult substrates in the R-hydroxynitrile lyase catalyzed hydrocyanation reaction: application of the mass transfer limitation principle in a two-phase system
J. E. G. Kemp, R. A. Bass, J. Bordner, P. E. Cross, R. F. Gammon and J. A. Price	975	Rational resolution of the isosteric enantiomers of 6,11-dihydrodibenzo-[*b,e*]thiepin-11-ol and conversion to the two isosteric diastereoisomers of the calcium channel blocker UK-74,756
K. Borsuk, K. Suwińska and M. Chmielewski	979	Stereocontrolled formation of cephams from 1,3-*O*-ethylidene-L-erythritol
B. Thierry, J.-C. Plaquevent and D. Cahard	983	New polymer-supported chiral phase-transfer catalysts in the asymmetric synthesis of α-amino acids: the role of a spacer
M. Sefkow	987	Synthesis of (+)-wikstromol by double alkylation of malic acid
		ARTICLES
C. I. Viturro, M. S. Maier, C. A. Stortz and J. R. de la Fuente	991	Antifungal diastereomeric furanones from *Mutisia friesiana*: structural determination and conformational analysis
K. Kim and L. S. Jimenez	999	A camphor-derived vinylsulfonium salt as a reagent for a cycloannulation
W.-S. Lee, H.-L. Kwong, H.-L. Chan, W.-W. Choi and L.-Y. Ng	1007	Chiral bipyridine–copper(I) complex-catalyzed enantioselective allylic oxidation of cyclic alkenes
A. Battaglia, G. Barbaro, P. Giorgianni, A. Guerrini and A. Pepe	1015	1′-Azido- and 1′-amino-1,3-dioxolan-4-ones
A. Hage, D. G. I. Petra, J. A. Field, D. Schipper, J. B. P. A. Wijnberg, P. C. J. Kamer, J. N. H. Reek, P. W. N. M. van Leeuwen, R. Wever and H. E. Schoemaker	1025	Asymmetric reduction of ketones via whole cell bioconversions and transfer hydrogenation: complementary approaches
H. Kiyota, E. Higashi, T. Koike and T. Oritani	1035	Lipase-catalyzed preparation of both enantiomers of methyl jasmonate
C. Forzato, R. Gandolfi, F. Molinari, P. Nitti, G. Pitacco and E. Valentin	1039	Microbial bioreductions of γ- and δ-ketoacids and their esters
M. Adamczyk and R. E. Reddy	1047	Synthesis of (*R*)-(+)-methyl 3-amino-3-(5-hydroxy-2-pyridinyl)propanoate, an analog of L-azatyrosine
C. J. Sanders, K. M. Gillespie and P. Scott	1055	Catalyst structure and the enantioselective cyclopropanation of alkenes by copper complexes of biaryldiimines: the importance of ligand acceleration

M. Bandini, P. G. Cozzi, P. Melchiorre, R. Tino and A. Umani-Ronchi	1063	Chemo- and enantioselective catalytic addition of propargyl chloride to aldehydes promoted by [Cr(Salen)] complexes
M. Pallavicini, E. Valoti, L. Villa and O. Piccolo	1071	Resolution of *ortho*- and *meta*-substituted 1-phenylethylamines with isopropylidene glycerol hydrogen phthalate
T. Suzuki and T. Torii	1077	Catalytic asymmetric Michael reactions using a chiral rhodium complex
Z. Freixa, M. M. Pereira, J. C. Bayón, A. M. S. Silva, J. A. R. Salvador, A. Matos Beja, J. A. Paixão and M. Ramos	1083	Diastereoselective hydroformylation of Δ^4-steroids with rhodium–phosphite catalysts
V. Guerrero de la Rosa, M. Ordóñez and J. M. Llera	1089	Palladium-catalyzed allylic nucleophilic substitution reactions of (*E*)-γ-acetoxy-α,β-unsaturated *p*-tolylsulfoxides
A. V. Sivakumar, G. S. Babu and S. V. Bhat	1095	Asymmetric synthesis of β-amino acids through application of chiral sulfoxide
	A189	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 8

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATIONS
S. P. Chavan, Y. T. Subbarao, A. G. Chittiboyina, R. Sivappa and C. G. Suresh	1101	Facile synthesis of a key intermediate for the synthesis of prostanes and isoprostanes
L. Xiao, K. Mereiter, F. Spindler and W. Weissensteiner	1105	A straightforward and modular synthesis of enantiopure C_2- and C_1-symmetrical 2,2″-phosphino-1,1″-biferrocenes
R. A. Tromp, M. van der Hoeven, A. Amore, J. Brussee, M. Overhand, G. A. van der Marel and A. van der Gen	1109	Chemoenzymatic synthesis of Fmoc-protected (2*S*,3*S*)-2-hydroxy-3-amino acids and their application in the synthesis of an α-hydroxylated β-hexapeptide
O. Bortolini, M. Fogagnolo, G. Fantin, S. Maietti and A. Medici	1113	Asymmetric epoxidation of cinnamic acid derivatives using dioxiranes generated in situ from dehydrocholic acid
S. Jones and J. C. C. Atherton	1117	Highly diastereoselective photochemical Diels–Alder reactions: towards the development of a photoactivated chiral auxiliary
F.-X. Felpin, G. Vo-Thanh, J. Villiéras and J. Lebreton	1121	The first enantioselective synthesis of (*S*)-5-bromo-3-(1-methyl-2-pyrrolidinyl)pyridine: a key intermediate for the preparation of SIB-1508Y
		ARTICLES
T. J. Wenzel, J. E. Thurston, D. C. Sek and J.-P. Joly	1125	Utility of crown ethers derived from methyl β-D-galactopyranoside and their lanthanide couples as chiral NMR discriminating agents
A. P. Rauter, J. Figueiredo, M. Ismael, T. Canda, J. Font and M. Figueredo	1131	Efficient synthesis of α,β-unsaturated γ-lactones linked to sugars
M. Chavarot, J. J. Byrne, P. Y. Chavant and Y. Vallée	1147	$Sc(BINOL)_2Li$: a new heterobimetallic catalyst for the asymmetric Strecker reaction
A. Alexakis and C. Benhaim	1151	Asymmetric conjugate addition to alkylidene malonates
K. W. Kottsieper, U. Kühner and O. Stelzer	1159	Synthesis of enantiopure C_1 symmetric diphosphines and phosphino-phosphonites with *ortho*-phenylene backbones

A. Alexakis, A.-S. Chauvin, R. Stouvenel, E. Vrancken, S. Mutti and P. Mangeney	1171	A practical and efficient synthesis of chiral *N,N*-disubstituted C_2 symmetric diamines derived from (*R,R*)-1,2-diaminocyclohexane
L. Minuti, A. Taticchi, A. Marrocchi, L. Costantini and E. Gacs-Baitz	1179	Stereoselective synthesis of enantiopure condensed [2.2]paracyclophanes
G. Guanti and R. Riva	1185	Homochiral isoquinolines by lipase-catalysed resolution and their diastereoselective functionalisation
G. Broggini, L. Garanti, G. Molteni and T. Pilati	1201	Stereoselective intramolecular cycloadditions of homochiral *N*-alkenoyl aryl azides
P. Hildebrandt, T. Riermeier, J. Altenbuchner and U. T. Bornscheuer	1207	Efficient resolution of prostereogenic arylaliphatic ketones using a recombinant alcohol dehydrogenase from *Pseudomonas fluorescens*
K. Zhao, Y. Wang and D. C. Billington	1211	Studies on stereocontrolled epoxidations of bis-alicyclic alcohols in steroidal skeletons: preparation of eight diastereomerically pure epoxides from cholest-4-en-3β,6β-; -3β,6α-; -3α,6β- and -3α,6α-diols
I. Baussanne, A. Chiaroni and J. Royer	1219	Asymmetric synthesis of 5-substituted pyrrolidinones via a chiral *N*-acyliminium equivalent
T. Mecca, S. Superchi, E. Giorgio and C. Rosini	1225	1,1′-Binaphthylazepine-based ligands for asymmetric catalysis. Part 1: Preparation and characterization of some new aminoalcohols and diamines
S. Superchi, T. Mecca, E. Giorgio and C. Rosini	1235	1,1′-Binaphthylazepine-based ligands for asymmetric catalysis. Part 2: New aminoalcohols as chiral ligands in the enantioselective addition of $ZnEt_2$ to aromatic aldehydes
Q.-H. Fan, G.-J. Deng, C.-C. Lin and A. S. C. Chan	1241	Preparation and use of MeO-PEG-supported chiral diphosphine ligands: soluble polymer-supported catalysts for asymmetric hydrogenation
	1249	Corrigendum
	A209	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 9

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATIONS
M. I. Colombo, J. Zinczuk, M. P. Mischne and E. A. Rúveda	1251	A concise synthesis of (+)-cassiol
T. C. Kinahan and H. Tye	1255	Synthesis of (*S*)-*N*-(diphenylphosphinyl)-*S*-methyl-*S*-phenyl sulfoximide: a new ligand for asymmetric catalysis
		ARTICLES
V. G. Nenajdenko, K. I. Smolko and E. S. Balenkova	1259	Enantioselective reduction of α,β-unsaturated ketones bearing the trifluoromethyl group
C. Gasch, M. A. Pradera, B. A. B. Salameh, J. L. Molina and J. Fuentes	1267	Isothiocyanato derivatives of sugars in the stereoselective synthesis of spironucleosides and spiro-*C*-glycosides
X. Fernandez and E. Duñach	1279	Asymmetric synthesis of 2-alkyl-3-thiazoline carboxylates: stereochemistry of the MnO_2-mediated oxidation of *cis*- and *trans*-2-alkyl-thiazolidine-(4*R*)-carboxylates

Z. Finta, Z. Hell, J. Bálint, A. Takács, L. Párkányi and L. Töke	1287	Synthesis and separation of substituted cyclopropane carboxylic acid amide isomers
S. Bedürftig, M. Weigl and B. Wünsch	1293	(1-Benzylpiperazin-2-yl)methanols: novel EPC synthesis from (*S*)-serine and transformation into ligands for central nervous system receptors
T. Katagiri, M. Handa, Y. Matsukawa, J. S. Dileep Kumar and K. Uneyama	1303	Efficient synthesis of an optically pure β-bromo-β,β-difluoroalanine derivative, a general precursor for β,β-difluoroamino acids
S. Panev, A. Linden and V. Dimitrov	1313	Chiral aminoalcohols with a menthane skeleton as catalysts for the enantioselective addition of diethylzinc to benzaldehyde
V. Dimitrov, G. Dobrikov and M. Genov	1323	Chiral β- and γ-aminoalcohols derived from (+)-camphor and (−)-fenchone as catalysts for the enantioselective addition of diethylzinc to benzaldehyde
V. Dimitrov, A. Linden and M. Hesse	1331	Chiral ferrocenes derived from (+)-longifolene — determination of the configuration by NMR spectroscopy and X-ray crystallography
R. Kolanoś, W. Wysocka, M. Kwit and J. Gawroński	1337	Contrasting chiroptical properties of sparteine lactams and thiolactams
G. Delapierre, J. M. Brunel, T. Constantieux and G. Buono	1345	Design of a new class of chiral quinoline–phosphine ligands. Synthesis and application in asymmetric catalysis
N. Okamoto, O. Hara, K. Makino and Y. Hamada	1353	Stereoselective synthesis of (3*S*,4*R*)-3,4-dimethyl-(*S*)-glutamine and the absolute stereochemistry of the natural product from papuamides and callipeltin
G. Asensio, J. Gil, P. Alemán and M. Medio-Simón	1359	An improved method for the asymmetric protonation of enolates with chiral α-sulfinyl alcohols/trifluoroethanol
P. Conti, G. Roda and F. F. Barberis Negra	1363	An improved synthesis of enantiomerically pure CIP-AS, a potent and selective AMPA-kainate receptor agonist
Mª L. Testa, C. Hajji, E. Zaballos-García, A. B. García-Segovia and J. Sepúlveda-Arques	1369	Asymmetric synthesis of (−)-pseudoephedrine from (2*S*,3*S*)-3-phenyloxiran-2-ylmethanol. Stereospecific interchange of amino and alcohol functions
H. Vankayalapati, G. Singh and I. Tranoy	1373	Stereoselective *O*-glycosylation reactions using glycosyl donors with diphenylphosphinate and propane-1,3-diyl phosphate leaving groups
A. Avenoza, C. Cativiela, J. M. Peregrina, D. Sucunza and M. M. Zurbano	1383	An alternative approach to (*S*)- and (*R*)-2-methylglycidol *O*-benzyl ether derivatives
F. Bargiggia and O. Piva	1389	Diastereoselective photodeconjugation of chiral α,β-unsaturated esters
	A241	Stereochemistry abstracts
	I	Instructions to contributors
	VII	Cumulative author index

NUMBER 10

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATIONS
O. Trapp, S. Caccamese, C. Schmidt, V. Böhmer and V. Schurig	1395	Enantiomerization of an inherently chiral resorcarene derivative: determination of the interconversion barrier by computer simulation of the dynamic HPLC experiment
R. Sánchez, H. Luna, H. I. Pérez, N. Manjarrez and A. Solís	1399	Evaluation of animal liver acetone powders for the resolution of 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid

H. Yoda, K. Maruyama and K. Takabe	1403	Asymmetric synthesis of the new marine epoxy lipid, (6*S*,7*S*,9*S*,10*S*)-6,9-epoxynonadec-18-ene-7,10-diol
T. V. Hansen and Y. Stenstrom	1407	First total synthesis of (−)-aplyolide A
A. Alexakis and A.-S. Chauvin	1411	Determination of the enantiomeric excess of chiral carboxylic acids by ^{31}P NMR with C_2 symmetrical diamines
		ARTICLES
M. Carda, E. Castillo, S. Rodríguez, F. González and J. A. Marco	1417	Stereoselective allylations of erythrulose derivatives under anhydrous conditions
I. Kumar, K. Manju and R. S. Jolly	1431	A new biocatalyst for the preparation of enantiomerically pure 2-arylpropanoic acids
M. Chrzanowska and J. Sokołowska	1435	Enantioselective addition of organolithium reagents to 3,4-dihydroisoquinoline in the presence of (−)-sparteine as an external ligand. Application for the synthesis of isoquinoline alkaloids
J. Uziel, C. Darcel, D. Moulin, C. Bauduin and S. Jugé	1441	Chemo-, regio- and stereoselective conversion of *P*-chirogenic phosphorus borane complexes into their P–O or P–S derivatives
G. Delogu, D. Fabbri, M. A. Dettori, A. Forni and G. Casalone	1451	C_2-Symmetric sulfur derivatives of 2,2′,3,3′-tetramethoxybiphenyl
W. J. Xia, D. R. Li, L. Shi and Y. Q. Tu	1459	A novel rearrangement of eudesmanolide enol ester epoxide: facile 1-step construction of the salvialane sesquiterpene skeleton
N. Coşkun, F. T. Tat and Ö. Ö. Güven	1463	The first regio- and diastereoselective synthesis of homochiral perhydroimidazoisoxazoles via the 1,3-dipolar cycloaddition of imidazoline 3-oxides with (1*S*)-(−)-β-pinene
S. Jansat, M. Gómez, G. Muller, M. Diéguez, A. Aghmiz, C. Claver, A. M. Masdeu-Bultó, L. Flores-Santos, E. Martin, M. A. Maestro and J. Mahía	1469	Chiral *S,S*-donor ligands in palladium-catalysed allylic alkylation
K. Hallman and C. Moberg	1475	Polymer-bound bis(oxazoline) as a chiral catalyst
V. Bertolasi, O. Bortolini, M. Fogagnolo, G. Fantin and P. Pedrini	1479	Enantioselective inclusion in bile acids: resolution of cyclic ketones
J. R. Dehli and V. Gotor	1485	Stereoselective alkylation–reduction of β-keto nitriles by the fungus *Curvularia lunata*
M. Tiecco, L. Testaferri, F. Marini, S. Sternativo, L. Bagnoli, C. Santi and A. Temperini	1493	A sulfur-containing diselenide as an efficient chiral reagent in asymmetric selenocyclization reactions
J. M. Andrés, N. de Elena, R. Pedrosa and A. Pérez-Encabo	1503	Stereoselective synthesis of (5*S*,6*S*)- and (5*S*,6*R*)-aza-muricatacin from an L-glutamic acid derivative
J. Bálint, G. Egri, M. Czugler, J. Schindler, V. Kiss, Z. Juvancz and E. Fogassy	1511	Resolution of α-phenylethylamine by its acidic derivatives
A. Steinreiber, S. F. Mayer, R. Saf and K. Faber	1519	Biocatalytic asymmetric and enantioconvergent hydrolysis of trisubstituted oxiranes
M. De Rosa, M. R. Acocella, A. Soriente and A. Scettri	1529	Asymmetric auto-inductive aldol reaction by self-assembly of chiral ligands
	A277	Stereochemistry abstracts
	I	Instructions to contributors
	V	Cumulative author index

NUMBER 11

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

C. E. Song, C. R. Oh, E. J. Roh and J. H. Choi — 1533 Asymmetric dihydroxylation of *trans*-cinnamates under high-pressure conditions: substantial increase of turnover number

H. M. Lee, S.-W. Kim, T. Hyeon and B. M. Kim — 1537 Asymmetric dihydroxylation using heterogenized cinchona alkaloid ligands on mesoporous silica

A. Zampella and M. V. D'Auria — 1543 Studies towards the synthesis of superstolide A. Synthesis and stereochemical assignment of the C(21)–C(26) fragment of superstolide A

A. J. A. Cobb and C. M. Marson — 1547 Reversal of enantioselectivity using catalysts containing multiple stereogenic centres

ARTICLES

F. J. Devlin, P. J. Stephens, P. Scafato, S. Superchi and C. Rosini — 1551 Determination of absolute configuration using vibrational circular dichroism spectroscopy: the chiral sulfoxide 1-thiochroman *S*-oxide

Q.-H. Fan, G.-H. Liu, X.-M. Chen, G.-J. Deng and A. S. C. Chan — 1559 The synthesis of dendritic BINOL ligands and their applications in the enantioselective Lewis acid catalyzed addition of diethylzinc to aldehydes

G. Chen, Y. Deng, L. Gong, A. Mi, X. Cui, Y. Jiang, M. C. K. Choi and A. S. C. Chan — 1567 Palladium-catalyzed allylic alkylation of *tert*-butyl(diphenylmethylene)-glycinate with simple allyl esters under chiral phase transfer conditions

D. Bouhlal, P. Martin, M. Massoui, G. Nowogrocki, S. Pilard, P. Villa and G. Goethals — 1573 Synthesis and epimerization of 10-*N*-(6-deoxy-1,2:3,4-di-*O*-isopropylidene-α-D-galactopyranos-6-yl)-(11a*S*)-pyrrolo[2,1-*c*][1,4]benzodiazepin-5,11-dione

Z.-H. Yang, L.-X. Wang, Z.-H. Zhou, Q.-L. Zhou and C.-C. Tang — 1579 Synthesis of new chiral Schiff bases and their application in the asymmetric trimethylsilylcyanation of aromatic aldehydes

W.-Q. Lin, Z. He, Y. Jing, X. Cui, H. Liu and A.-Q. Mi — 1583 A practical synthesis of ethyl (*R*)- and (*S*)-2-hydroxy-4-phenylbutanoate and D-homophenylalanine ethyl ester hydrochloride from L-malic acid

D. Ellis — 1589 Racemisation-free synthesis of chiral acylsulfonamides

T. Miyazawa, T. Yukawa, T. Koshiba, H. Sakamoto, S. Ueji, R. Yanagihara and T. Yamada — 1595 Resolution of 2-aryloxy-1-propanols via lipase-catalyzed enantioselective acylation in organic media

W.-M. Dai, K. K. Y. Yeung, C. W. Chow and I. D. Williams — 1603 Study on enantiomerically pure 2-substituted *N*,*N*-dialkyl-1-naphthamides: resolution, absolute stereochemistry, and application to desymmetrization of cyclic *meso* anhydrides

V. Guerrero de la Rosa, M. Ordóñez and J. M. Llera — 1615 Asymmetric synthesis of both diastereomers of protected *S*-methyl-L-cysteine and *S*-*n*-propyl-L-cysteine sulphoxides

A. P. Ayscough, J. F. Costello and S. G. Davies — 1621 Conformational diastereoisomers of PPh_3 coordinated to stereogenic metal centres as molecular optical switches

F. Márquez, A. Llebaria and A. Delgado — 1625 Studies on the diastereoselective allylation of aldehydes with enantiopure 2-sulfinylallyl building blocks

F. Bravo, Y. Díaz and S. Castillón — 1635 Stereoselective synthesis of both enantiomers of 1,4-anhydro-alditols, 1,4-anhydro-2-amino-alditols and D- and L-isonucleosides from 2,3-*O*-isopropylidene-D-glyceraldehyde using iodine-induced cyclization as the key step

D. T. Guranda, L. M. van Langen, F. van Rantwijk, R. A. Sheldon and V. K. Švedas — 1645 Highly efficient and enantioselective enzymatic acylation of amines in aqueous medium

S. Jarosz and S. Skóra — 1651 — Sugar allyltins in the synthesis of carbobicycles. Preparation of highly oxygenated enantiomerically pure decalins

C. J. Moody, C. N. Morfitt and A. M. Z. Slawin — 1657 — Preparation of chiral α-diazophosphonic acid derivatives

G. R. Evans, J. A. Henshilwood and J. O'Rourke — 1663 — Highly efficient resolution of (±)-Tramadol with di-*p*-toluoyl-tartaric acid (DTTA)

1671 — Erratum

A299 — Stereochemistry abstracts

I — Instructions to contributors

V — Cumulative author index

NUMBER 12

Contents

v — Contributors to this issue

vii — Graphical abstracts

COMMUNICATION

M. V. Gil, E. Román, J. A. Serrano, M. B. Hursthouse and M. E. Light — 1673 — Stereoselective denitrohydrogenation reactions of 4-alkyl-5-glyco-4-nitrocyclohex-1-enes

ARTICLES

T. Mino, Y. Tanaka, K. Akita, K. Anada, M. Sakamoto and T. Fujita — 1677 — Palladium-catalyzed asymmetric allylic alkylation using chiral aminophosphine ligands

G. Revial, I. Jabin, M. Redolfi and M. Pfau — 1683 — Enantioselective imine Michael reaction for the preparation of the (8′*R*,8a′*S*)-8,8a′-dimethyl-1′,3′,4′,7′,8′,8a′-hexahydrospiro[1,3-dioxolane-2,2′(6′*H*)naphthalen]-6′-one building block. A formal synthesis of (+)-valencenol

S. Usse, G. Pave, G. Guillaumet and M.-C. Viaud-Massuard — 1689 — Synthesis of enantiomerically pure 3-aminochroman derivatives

N. W. Fadnavis, R. L. Babu, G. Sheelu and A. Deshpande — 1695 — 'Gelozymes' in organic synthesis. Part 2: *Candida rugosa* lipase mediated synthesis of enantiomerically pure (*S*)-cyano(3-phenoxyphenyl)methyl butyrate

B. J. Rowe and C. D. Spilling — 1701 — The synthesis of 1-hydroxy phosphonates of high enantiomeric excess using sequential asymmetric reactions: titanium alkoxide-catalyzed P C bond formation and kinetic resolution

H. I. Pérez, H. Luna, N. Manjarrez and A. Solis — 1709 — Resolution of methylarylmethanols via oxidation with *Nocardia corallina*

Y. Yasohara, N. Kizaki, J. Hasegawa, M. Wada, M. Kataoka and S. Shimizu — 1713 — Stereoselective reduction of alkyl 3-oxobutanoate by carbonyl reductase from *Candida magnoliae*

K. Ng, R. Somanathan and P. J. Walsh — 1719 — Synthesis of homochiral pentadentate sulfonamide-based ligands

Y. Caro, C. F. Masaguer and E. Raviña — 1723 — Synthesis of optically active β-benzyl-γ-butyrolactone through lipase-catalyzed kinetic resolution

G. Singh and H. Vankayalapati — 1727 — Efficient stereocontrolled synthesis of C-glycosides using glycosyl donors substituted by propane 1,3-diyl phosphate as the leaving group

M. Sánchez, I. Maestre, C. Jaime and A. Virgili — 1737 — Di[(*S*)-1-(9-anthryl)-2,2,2-trifluoroethyl]sulphite. a case of diastereotopic anthracene groups

T. Bauer and J. Tarasiuk — 1741 — Asymmetric Morita–Baylis–Hillman reaction of chiral glyoxylates

R. Alibés, F. Busquè, P. de March, M. Figueredo, J. Font, M. E. Gambino and B. A. Keay — 1747 — Acetals of γ-oxo-α,β-unsaturated esters in nitrone cycloadditions. Regio- and stereochemical implications

K. Makino, N. Okamoto, O. Hara and Y. Hamada — 1757 — Efficient enantioselective synthesis of (2*R*,3*R*)- and (2*S*,3*S*)-3-hydroxyleucines and their diastereomers through dynamic kinetic resolution

P. Piątek, M. M. Gruza and J. Jurczak — 1763 — Chiral α,ω-diaminoethers derived from D-mannitol and L-treitol as building blocks for the synthesis of macrocyclic compounds possessing 1,3-benzenedicarboxamide or 2,6-pyridinedicarboxamide subunits

M. Nevalainen and V. Nevalainen — 1771 — (+)-Camphor-derived amino alcohols as ligands for the catalytic enantioselective addition of diethylzinc to benzaldehydes

G. Zanoni, F. Agnelli, A. Meriggi and G. Vidari — 1779 — Enantioselective syntheses of isoprostane and iridoid lactones intermediates by enzymatic transesterification

G. Zanoni, S. Re, A. Meriggi, F. Castronovo and G. Vidari — 1785 — Enantioselective synthesis of *cis*-1,2-dialkyl substituted cyclopentanoid and isoprostane building blocks via 6-*exo*-trigonal radical cyclizations

Y. Tsuzuki, K. Chiba and K. Hino — 1793 — Efficient stereospecific synthesis of (*S*,*S*)-3-methoxy-4-methylaminopyrrolidine

D. J. Cross, J. A. Kenny, I. Houson, L. Campbell, T. Walsgrove and M. Wills — 1801 — Rhodium versus ruthenium: contrasting behaviour in the asymmetric transfer hydrogenation of α-substituted acetophenones

A317 — Stereochemistry abstracts

I — Instructions to contributors

V — Cumulative author index

NUMBER 13

Contents

v — Contributors to this issue

vii — Graphical abstracts

COMMUNICATIONS

L. Rambaud, P. Compain and O. R. Martin — 1807 — First total synthesis of (+)-hyacinthacine A_2

M. C. Bernabeu, R. Chinchilla, L. R. Falvello and C. Nájera — 1811 — Asymmetric Diels–Alder reactions of optically active oxazolidinone-derived vinylsulfonamides

ARTICLES

M.-L. Leroux, T. Le Gall and C. Mioskowski — 1817 — Enantioselective synthesis of α,α-disubstituted amines from nitroalkenes

A. Berger, R. F. de Souza, M. R. Delgado and J. Dupont — 1825 — Ionic liquid-phase asymmetric catalytic hydrogenation: hydrogen concentration effects on enantioselectivity

B. Altava, M. I. Burguete, J. I. García, S. V. Luis, J. A. Mayoral and M. J. Vicent — 1829 — A test for the coexistence of reactive intermediates with different molecular composition in chiral Lewis acid-catalysed reactions: the case of Ti-TADDOLate-catalysed Diels–Alder reactions

J. Vázquez, S. Fonquerna, A. Moyano, M. A. Pericàs and A. Riera — 1837 — Bornane-2,10-sultam: a highly efficient chiral controller and mechanistic probe for the intermolecular Pauson–Khand reaction

G. Cabarrocas, M. Ventura, M. Maestro, J. Mahía and J. M. Villalgordo	1851	Synthesis of novel optically pure quinolyl-β-amino alcohol derivatives from 2-amino thiophenol and chiral α-acetylenic ketones and their IBX-mediated oxidative cleavage to *N*-Boc quinolyl carboxamides
Y. H. Kim, C. S. Cheong, S. H. Lee and K. S. Kim	1865	Enzymatic kinetic resolution of ketorolac
E. Brenna, C. Dei Negri, C. Fuganti and S. Serra	1871	Baker's yeast-mediated approach to (−)-*cis*- and (+)-*trans*-Aerangis lactones
J. Kámán, E. Forró and F. Fülöp	1881	Enzyme-catalysed kinetic resolution of *N,O*-diacetyl derivatives of cyclic 1,3-amino alcohols
M. Periasamy, V. Dharma Rao and M. Seenivasaperumal	1887	Resolution of C_2-symmetric 2,3-diphenylbutane-1,4-diol and purification of diastereomeric 1,4-diphenylbutane-1,4-diol using (*S*)-proline and boric acid
J. M. Fraile, J. I. García, C. I. Herrerías, J. A. Mayoral, D. Carrié and M. Vaultier	1891	Enantioselective cyclopropanation reactions in ionic liquids
S. Jarosz, S. Skóra, K. Szewczyk and Z. Ciunik	1895	Reaction of sugar allyltins with aldehydes. A remarkable difference in reactivity between furanose and pyranose organometallic derivatives
J. Zhang, H.-B. Zhou, S.-M. Lü, M.-M. Luo, R.-G. Xie, M. C. K. Choi, Z.-Y. Zhou, A. S. C. Chan and T.-K. Yang	1907	Chiral squaric prolinols: a new type of ligand for the asymmetric reduction of prochiral ketones by borane
P. Kongsaeree, P. Meepowpan and Y. Thebtaranonth	1913	Synthesis of both enantiomers of methylenolactocin, nephrosterinic acid and protolichesterinic acid via tandem aldol–lactonization reactions
J. Skarżewski, M. Zielińska-Blajet and I. Turowska-Tyrk	1923	Simple preparation of enantiomeric Michael adducts of thiophenol to chalcones: easily available new chiral building blocks
A. Mandoli, L. A. Arnold, A. H. M. de Vries, P. Salvadori and B. L. Feringa	1929	New bidentate chiral phosphoramidites in copper-catalyzed asymmetric 1,4-addition of diethylzinc to cyclic α,β-enones: enantioselective tandem 1,4-addition-aldol reactions with 2-cyclopentenone
S. Szymański, C. Chapuis and J. Jurczak	1939	Diastereoselectivity in the hetero [4+2] cycloaddition of cyclopentadiene to *N*-benzyliminoacetyl derivatives of (2*R*)-bornane-10,2-sultam and other chiral secondary alcohols
S. A. Said and A. Fiksdahl	1947	Stereoselective transformation of amines via chiral 2,4,6-triphenylpyridinium intermediates
A. S. Demir, H. Hamamci, O. Sesenoglu, F. Aydogan, D. Capanoglu and R. Neslihanoglu	1953	Simple chemoenzymatic access to enantiopure pharmacologically interesting (*R*)-2-hydroxypropiophenones
	A343	Stereochemistry abstracts
	I	Instructions to contributors
	V	Cumulative author index

NUMBER 14

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATIONS
F. Mazé, M. Purpura, F. Bernaud, P. Mangeney and A. Alexakis	1957	Regio- and diastereoselective S_N2' or S_N2'' reactions on chiral acetals of cyclic aldehydes promoted by PhCu. BF_3

K. Krohn, K. Steingröver and F. Zsila	1961	The absolute configuration of the palmarumycins C_9, C_{10}, and C_{12} by quantum-mechanical calculations of CD spectra
I. Sato, D. Omiya, K. Tsukiyama, Y. Ogi and K. Soai	1965	Evidence of asymmetric autocatalysis in the enantioselective addition of diisopropylzinc to pyrimidine-5-carbaldehyde using chiral pyrimidyl alkanol
K. Molvinger and J. Court	1971	Reaction of a chiral oxygen–sulfur paired bidentate ligand with nickel and iron boride: asymmetric borane reduction of ketones
S. Karlsson and H.-E. Högberg	1975	Diastereoselective addition of chiral azomethine ylides to cinnamoyl moieties, attached to chiral auxiliaries
		ARTICLES
S. Karlsson and H.-E. Högberg	1977	Synthesis of enantiomerically pure 4-substituted pyrrolidin-3-ols via asymmetric 1,3-dipolar cycloaddition
S. Pellet-Rostaing, C. Saluzzo, R. Ter Halle, J. Breuzard, L. Vial, F. Le Guyader and M. Lemaire	1983	Grignard cross-coupling catalyzed by chiral phosphino–quincorine and phosphino–quincoridine derivatives
E. Durán, E. Gordo, J. Granell, M. Font-Bardía, X. Solans, D. Velasco and F. López-Calahorra	1987	Enantiomeric resolution and determination of the absolute configuration of dibenzophosphole 5-oxides
D. H. Hua, T. X. C. Nguyen, J. W. McGill, Y. Chen and P. D. Robinson	1999	Resolution of 8′-alkoxy- and hydroxy-1,1′-binaphthalen-8-ols
P. A. Procopiou, G. E. Morton, M. Todd and G. Webb	2005	Enantioselective synthesis of (*S*)-salmeterol via asymmetric reduction of azidoketone by *Pichia angusta*
A. Madhan, A. R. Kumar and B. V. Rao	2009	Stereoselective synthesis of (−)-cytoxazone
G. Aranda, M. Cortés, M. Maurs and R. Azerad	2013	Microbiologically-assisted hemisynthesis of 1α-hydroxydrimenol
G. Uccello-Barretta, S. Bardoni, F. Balzano and P. Salvadori	2019	Versatile chiral auxiliaries for NMR spectroscopy based on carbamoyl derivatives of dihydroquinine
A. Ruderisch, J. Pfeiffer and V. Schurig	2025	Synthesis of an enantiomerically pure resorcinarene with pendant L-valine residues and its attachment to a polysiloxane (Chirasil-Calix)
Y. Vera-Ayoso, P. Borrachero, F. Cabrera-Escribano, Mª J. Diánez, Mª D. Estrada, M. Gómez-Guillén, A. López-Castro and S. Pérez-Garrido	2031	Towards cyclic, conformationally constrained, fluorine-containing β-amino acid derivatives from D-glucose
B. T. Cho and D. J. Kim	2043	Efficient synthesis of optically active β-hydroxy *p*-tolylsulfones with very high enantiomeric excess via CBS–oxazaborolidine-catalyzed borane reduction
J. A. Bajgrowicz and I. Frank	2049	Camphor-derived amber woody odorants: 1,7,7-trimethyl-2′-*iso*-propyl-spiro[bicyclo[2.2.1]heptane-2,4′-(1,3-dioxanes)]
A. Liljeblad, R. Aksela and L. T. Kanerva	2059	Use of enantio-, chemo- and regioselectivity of acylase I. Resolution of polycarboxylic acid esters
A. Steinreiber, K. Edegger, S. F. Mayer and K. Faber	2067	Enantio- and diastereo-convergent synthesis of (2*R*,5*R*)- and (2*R*,5*S*)-Pityol through enzyme-triggered ring closure
G. Kim and E. Lee	2073	Expedient syntheses of indolizidines (−)-167B and (−)-209D
S. Arrasate, E. Lete and N. Sotomayor	2077	Synthesis of enantiomerically enriched amines by chiral ligand mediated addition of organolithium reagents to imines
	A369	Stereochemistry abstracts
	I	Instructions to contributors
	V	Cumulative author index

NUMBER 15

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

F. Guillen, C. L. Winn and A. Alexakis 2083 Enantioselective copper-catalyzed conjugate addition using chiral diaminocarbene ligands

J. Pytkowicz, S. Roland and P. Mangeney 2087 Enantioselective conjugate addition of diethylzinc using catalytic silver(I) diaminocarbenes and $Cu(OTf)_2$

P. Gosselin, M. Lelièvre and B. Poissonnier 2091 First synthesis of (−)-(1*R*,4*R*)- and (+)-(1*S*,4*S*)-(7,7-dimethyl-2-methylenebicyclo[2.2.1]hept-1-yl)-methanol: new fenchone-derived chiral auxiliaries

J. Wöltinger, H. Henniges, H.-P. Krimmer, A. S. Bommarius and K. Drauz 2095 Application of the continuous Sharpless dihydroxylation

E. Vázquez, A. Galindo, D. Gnecco and S. Bernès 2099 Synthesis of (−)-(1′*S*,4a*S*,8a*R*)- and (+)-(1′*S*,4a*R*,8a*S*)-4a-ethyl-1-(1′-phenylethyl)-octahydroquinolin-7-ones

M. Bertau, M. Bürli, E. Hungerbühler and P. Wagner 2103 A novel highly stereoselective synthesis of chiral 5- and 4,5-substituted 2-oxazolidinones

ARTICLES

B. K. Pchelka, A. Loupy, J. Plenkiewicz, A. Petit and L. Blanco 2109 Resolution of racemic 3-aryloxy-1-nitrooxypropan-2-ols by lipase-catalyzed enantioselective acetylation

Y. Gong and K. Kato 2121 Diastereoselective Friedel–Crafts reaction of α-trifluoromethyl imines derived from chiral amines

J. S. Yadav, S. Nanda and A. B. Rao 2129 Enzymatic asymmetric hydroxylation of unnatural substrates with soybean lipoxygenase

Z. Zhang, Z. Xiong, G. Zheng and Y. Li 2137 First enantioselective total synthesis of glutinone and its C(7) and C(11) epimers

F. Fazio and M. P. Schneider 2143 A facile access to 2-deoxy-L-ribose

G. Lu, X. Li, Z. Zhou, W. L. Chan and A. S. C. Chan 2147 Enantioselective alkynylation of aromatic aldehydes catalyzed by new chiral amino alcohol-based ligands

A. G. Martínez, E. Teso Vilar, A. García Fraile and P. Martínez-Ruiz 2153 Enantioselective synthesis of both enantiomers of vicinal norbornanediamines through the Leuckart reaction of 2-norbornanones

C. Baldoli, S. Maiorana, E. Licandro, G. Zinzalla, M. Lanfranchi and A. Tiripicchio 2159 Stereoselective hetero Diels–Alder reactions of chiral tricarbonyl (η^6-benzaldehyde)chromium complexes

Q. K. Fang, P. Grover, Z. Han, F. X. McConville, R. F. Rossi, D. J. Olsson, D. W. Kessler, S. A. Wald and C. H. Senanayake 2169 Practical chemical and enzymatic technologies for (*S*)-1,4-benzodioxan-2-carboxypiperizine intermediate in the synthesis of (*S*)-doxazosin mesylate

A. M. Gómez, M. Casillas, S. Valverde and J. C. López 2175 Stereocontrolled entry to β-*C*-glycosides and bis-*C*,*C*-glycosides from *C*-glycals: preparation of a highly functionalized triene from D-mannose

E. Fontaine, C. Namane, J. Mencyrol, M. Geslin, L. Serva, E. Roussey, S. Tissandié, M. Maftouh and P. Roger 2185 Synthesis of optically-active benzylic amines: asymmetric reduction of ketoxime ethers with chiral oxazaborolidines

S. Serra and C. Fuganti 2191 Baker's yeast mediated biohydrogenation of sulphur-functionalised methacrolein derivatives. Stereochemical aspects of the reaction and preparation of the two enantiomers of useful C_4 bifunctional chiral synthons

A. I. Polosukhin, O. G. Bondarev, S. E. Lyubimov, A. V. Korostylev, K. A. Lyssenko, V. A. Davankov and K. N. Gavrilov	2197	New chiral phosphite ligands bearing sp^2-nitrogen: complexation properties and palladium(II)-catalysed enantioselective allylic alkylation
A. Costa, C. Nájera and J. M. Sansano	2205	Convergent asymmetric synthesis of indolizidines from (*S*)-5-(tosylmethyl)-2-pyrrolidinone: synthesis of (−)-ô-coniceine
N. Graf v. Keyserlingk and J. Martens	2213	Synthesis of optically active functionalised cyclic ketimines and their application in enantioselective catalysis
	2223	Corrigendum
	A391	Stereochemistry abstracts
	I	Instructions to contributors
	V	Cumulative author index

NUMBER 16

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		TETRAHEDRON: ASYMMETRY REPORT NUMBER 51
P. Daverio and M. Zanda	2225	Enantioselective reductions by chirally modified alumino- and borohydrides
		COMMUNICATIONS
M. Avalos, R. Babiano, P. Cintas, F. R. Clemente, R. Gordillo, M. B. Hursthouse, J. L. Jiménez, M. E. Light and J. C. Palacios	2261	Carbohydrates as chiral controllers: synthesis of dihydrothieno[2,3-*c*]-furanones
M. Avalos, R. Babiano, P. Cintas, F. R. Clemente, R. Gordillo, M. B. Hursthouse, J. L. Jiménez, M. E. Light and J. C. Palacios	2265	A cycloaddition strategy for the synthesis of thiirane-containing glycomimetics
		ARTICLES
R. Kumareswaran and A. Hassner	2269	Asymmetric syntheses of *N*-acetyl-(*R*)-coniine and *N*-Boc-(2*R*,6*R*)-solenopsin A via ring-closing metathesis
A. Cipiciani, F. Bellezza, F. Fringuelli and M. G. Silvestrini	2277	Influence of pH and temperature on the enantioselectivity of propan-2-ol-treated *Candida rugosa* lipase in the kinetic resolution of (±)-4-acetoxy-[2.2]-paracyclophane
S. Joly and M. S. Nair	2283	Efficient enzymatic kinetic resolution of 4-hydroxytetralone and 3-hydroxyindanone
E. Holder, G. Schoetz, V. Schurig and E. Lindner	2289	Synthesis and enantiomer separation of a modified tris(2,2′-bipyridine)-ruthenium(II) complex
M. Tichý, P. Holý, J. Závada, I. Císařová and J. Podlaha	2295	Helix-forming self-assembly of enantiopure 2,2′-dimethylbiphenyl-6,6′-dipropiolic acid and amide organized by hydrogen bonds
P.-E. Tong, P. Li and A. S. C. Chan	2301	Synthesis of *N*,*N*-dimethyl-2-amino-1,2-dicyclohexylethanol and its application in the enantioselective conjugate addition of diethylzinc to enones: a convenient upgrade of the chiral ligand via hydrogenation
C. Tanyeli, G. Çelikel and İ. M. Akhmedov	2305	Resolution of (±)-2-substituted norbornadiene and hexachloronorbornadiene derivatives using CCL and PLE

A. S. Demir, Ö. Sesenoglu and Z. Gerçek-Arkin — 2309 — An asymmetric synthesis of both enantiomers of 2,2,2-trifluoro-1-furan-2-yl-ethylamine and 3,3,3-trifluoroalanine from 2,2,2-trifluoro-1-furan-2-yl-ethanone

S. Chandrasekhar, T. Ramachandar and B. V. Rao — 2315 — Chiron approach to callipeltin A: first synthesis of fully protected (2*R*,3*R*,4*S*)-4,7-diamino-2,3-dihydroxy heptanoic acid

B. Jiang, Y. Feng and J.-F. Hang — 2323 — Catalytic enantioselective synthesis of secondary alcohols using C_2-symmetric diamino diol ligands

M. Feroci, A. Inesi, L. Palombi and L. Rossi — 2331 — Electrochemical generation of chiral oxazolidin-2-ones anions: a new procedure for the highly diastereoselective conjugate addition to nitroalkenes

F.-Y. Zhang, W. H. Kwok and A. S. C. Chan — 2337 — A comparison of the asymmetric hydrogenation catalyzed by rhodium complexes containing chiral ligands with a binaphthyl unit and those with a 5,5′,6,6′,7,7′,8,8′-octahydro-binaphthyl unit

S. Kiyooka, K. A. Shahid, K. Murai, Y.-N. Li, M. Okazaki and Y. Shuto — 2343 — Superior substrate control on diastereoselection in boric Lewis acid-promoted aldol reactions. Asymmetric synthesis of a 3,4-*syn* homologous series of ethyl 3,5-dihydroxy-2,4-dimethyl-5-phenylpentanoates

E. Forró and F. Fülöp — 2351 — Synthesis of 4-aryl-substituted β-lactam enantiomers by enzyme-catalyzed kinetic resolution

A413 — Stereochemistry abstracts

I — Instructions to contributors

V — Cumulative author index

NUMBER 17

Contents

v — Contributors to this issue

vii — Graphical abstracts

TETRAHEDRON: ASYMMETRY REPORT NUMBER 52

C. Lauret — 2359 — Epoxy ketones as versatile building blocks in organic synthesis

COMMUNICATIONS

M. Adamczyk, S. R. Akireddy and R. E. Reddy — 2385 — Asymmetric synthesis of (*S*)-(−)-acromelobinic acid

K. Misbahi, M. Lardic, V. Ferrières, N. Noiret, A. Kerbal and D. Plusquellec — 2389 — Unexpected fluorous solvent effect on oxidation of 1-thioglycosides

G. Cardillo, L. Gentilucci, M. Gianotti, H. Kim, R. Perciaccante and A. Tolomelli — 2395 — Conjugate addition of hydroxylamino derivatives to alkylidene malonates in the presence of chiral Lewis acids

ARTICLES

S. Bastin, F. Agbossou-Niedercorn, J. Brocard and L. Pélinski — 2399 — Enantioselective alkylation of benzaldehyde with diethylzinc catalyzed by 1,1′- and 1,2-disubstituted ferrocenyl amino alcohols

P. Potier, A. Bouchu, J. Gagnaire and Y. Queneau — 2409 — Proteinase N-catalysed regioselective esterification of sucrose and other mono- and disaccharides

W.-C. Shieh, S. Xue, N. Reel, R. Wu, J. Fitt and O. Repič — 2421 — An enantioselective synthesis of (*R*)-4-piperidinylglycine

A. R. Katritzky, H.-Y. He, R. Jiang and Q. Long	2427	2-Substituted-1,2,3,4-tetrahydroisoquinolines and chiral 3-carboxyl analogues from *N*-benzotriazolylmethyl-*N*-phenethylamines
T. Mino, Y. Tanaka, M. Sakamoto and T. Fujita	2435	Palladium-catalyzed asymmetric allylic alkylation using (*R*)-2-(methoxymethyl)pyrrolidine-derived aminophosphine ligands
C. Bolm, O. Beckmann, T. Kühn, C. Palazzi, W. Adam, P. B. Rao and C. R. Saha-Möller	2441	Influence of hydroperoxides on the enantioselectivity of metal-catalyzed asymmetric Baeyer–Villiger oxidation and epoxidation with chiral ligands
P. Virsu, A. Liljeblad, A. Kanerva and L. T. Kanerva	2447	Preparation of the enantiomers of 1-phenylethan-1,2-diol. Regio- and enantioselectivity of acylase I and *Candida antarctica* lipases A and B
S. Singh, S. Kumar and S. S. Chimni	2457	*Humicola lanuginosa* lipase-catalyzed enantioselective resolution of β-hydroxy sulfides: versatile synthons for enantiopure β-hydroxy sulfoxides
S. C. Jha and N. N. Joshi	2463	Aluminium–SALEN complex: a new catalyst for the enantioselective Michael reaction
C. Borriello, M. E. Cucciolito, A. Panunzi and F. Ruffo	2467	Novel chiral diimines and diamines derived from sugars in copper-catalysed asymmetric cyclopropanation
D. Guieysse, C. Salagnad, P. Monsan and M. Remaud-Simeon	2473	Resolution of 2-bromo-*o*-tolyl-carboxylic acid by transesterification using lipases from *Rhizomucor michei* and *Pseudomonas cepacia*
I. Izquierdo, M. T. Plaza, R. Robles and F. Franco	2481	Polyhydroxylated pyrrolizidines. Part I: Short and highly stereocontrolled syntheses of hyacinthacines
M. Pallavicini, E. Valoti, L. Villa and O. Piccolo	2489	Reciprocal resolutions between 1-phenylethylamine and carboxyesters of isopropylidene glycerol: improvement of the method by replacing monophthalate with 3-carboxy-2-naphthoate
	A435	Stereochemistry abstracts
	I	Instructions to contributors
	V	Cumulative author index

NUMBER 18

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATIONS
A. Martorell, R. Naasz, B. L. Feringa and P. G. Pringle	2497	Phosphonite ligands for enantioselective copper(I)-catalysed conjugate addition of diethylzinc to enones
A. Suárez and A. Pizzano	2501	New chiral phosphine–phosphites: a convenient synthesis based on the demethylation of *o*-anisyl phosphines and application in highly enantioselective catalytic hydrogenations
		ARTICLES
J. S. Yadav, H. M. Meshram, A. R. Prasad, Y. S. S. Ganesh, A. B. Rao, G. Seenayya, M. V. Swamy and M. G. Reddy	2505	L-Selective dipeptide synthesis using novel thermophilic enzyme from *Clostridium* sp.
T. Kumagai and S. Itsuno	2509	Asymmetric allylation polymerization of bis(allylsilane) and dialdehyde containing Si–phenyl linkage
V. G. Nenajdenko, A. S. Karpov and E. S. Balenkova	2517	A new convenient approach to chiral β-aryl(heteroaryl)alkylamines
S. Lutsenko and C. Moberg	2529	Microwave-mediated ruthenium-catalyzed asymmetric hydrogen transfer

K. Kulig, U. Holzgrabe and B. Malawska	2533	Stereocontrolled synthesis of the enantiomers of 1-[2-hydroxy-3-(4-phenyl-1-piperazinyl)-propyl]-pyrrolidin-2-one
S. Niwayama and J. Liu	2537	Asymmetric synthesis of 6-formyl-1-alkoxycarbonylbicyclo[3.1.0]hex-2-ene-2-carboxylic acids by a novel buffer-mediated rearrangement
T. Tsujigami, T. Sugai and H. Ohta	2543	Microbial asymmetric reduction of α-hydroxyketones in the anti-Prelog selectivity
S. E. Boiadjiev and D. A. Lightner	2551	An enantiomerically pure bilirubin. Absolute configuration of (α*R*,α′*R*)-dimethylmesobilirubin-XIIIα
X.-Y. Wu, H.-D. Xu, F.-Y. Tang and Q.-L. Zhou	2565	Asymmetric hydroarylation of norbornene derivatives catalyzed by palladium complexes of chiral quinolinyl-oxazolines
A. Gaucher, Y. Zuliani, D. Cabaret, M. Wakselman and J.-P. Mazaleyrat	2571	Synthesis and resolution of $\beta^{2,2}$-HBin, the first enantiomerically stable β-amino acid with chirality only due to axial dissymmetry
F. Effenberger and S. Oßwald	2581	(*E*)-Selective hydrolysis of (*E,Z*)-α,β-unsaturated nitriles by the recombinant nitrilase AtNIT1 from *Arabidopsis thaliana*
D. Jayaprakash and H. Sasai	2589	Synthesis and catalytic applications of soluble polymer-supported BINOL
M. Ono, K. Suzuki, S. Tanikawa and H. Akita	2597	First synthesis of (+)- and (−)-elvirol based on an enzymatic function
A. Solladié-Cavallo, M. Balaz, M. Salisova, C. Suteu, L. A. Nafie, X. Cao and T. B. Freedman	2605	A new chiral oxathiane: synthesis, resolution and absolute configuration determination by vibrational circular dichroism
H. J. Zhu, B. T. Zhao, G. Y. Zuo, C. U. Pittman, Jr., W. M. Dai and X. J. Hao	2613	Chiral ligands derived from *abrine*. Part 7: Effect of *O, S, N* in aromatic ring substituents at C-1 on enantioselectivity induced by tetrahydro-β-carboline ligands in diethylzinc addition to aldehydes
S. H. Park, H. J. Kang, S. Ko, S. Park and S. Chang	2621	A short and concise synthetic route to (−)-coniceine
P. Dorizon, C. Martin, J.-C. Daran, J.-C. Fiaud and H. B. Kagan	2625	A practical kinetic resolution of 4-acetyl[2.2]paracyclophane
Y. Fort, P. Gros and A. L. Rodriguez	2631	First one-pot chemo-, regio- and enantioselective functionalisation of pyridine compounds mediated by BuLi-(*S*)-(−)-*N*-methyl-2-pyrrolidine methoxide
	A455	Stereochemistry abstracts
	I	Instructions to contributors
	V	Cumulative author index

NUMBER 19

Contents

	v	Contributors to this issue
	vii	Graphical abstracts
		COMMUNICATION
E. Quezada, L. Santana and E. Uriarte	2637	Resolution of racemic carbonucleosides and assignment of the absolute configuration by NMR
		ARTICLES
F. D. P. Morisso and V. E. U. Costa	2641	Kinetic resolution of (±)-5-bromo-12-oxa-pentacyclo-[6.2.1.1^{6,9}.0^{2,7}.0^{2,10}]-dodeca-4-ene-3-*endo*-ol and (±)-5-bromo-13-oxa-pentacyclo[6.2.2.1^{6,9}.0^{2,7}.0^{2,10}]trideca-4-ene-3-*endo*-ol via *Pseudomonas*-mediated lipase-catalyzed transesterification

K. S. Kim, S. O. Choi, J. M. Park, Y. J. Lee and J. H. Kim	2649	Introduction of *cis*-vicinal amino alcohol functionality into the cyclohexane ring employing (1*S*,2*S*)-2-amino-1,2-diphenylethanol: synthesis of enantiopure aminocyclohexitols
T. Kassem, J. Wehbe, V. Rolland-Fulcrand, M. Rolland, M.-L. Roumestant and J. Martinez	2657	Synthesis of enantiomerically pure (3*R*,4*R*,5*R*)-4-hydroxy isoleucine lactone
F. Clerici, M. L. Gelmi, D. Pocar and T. Pilati	2663	Masked constrained cysteines: diastereoselective and enantioselective synthesis of 1-amino-2-mercaptocyclopropanecarboxylic acid derivatives
H. Brunner, M. Schönherr and M. Zabel	2671	Enantioselective catalysis. Part 142: Carbohydrate-derived oxime ethers from functionalised aldehydes and *O*-β-D-glucopyranosylhydroxylamine—new C–N ligands stable towards hydrolysis
W. Adam, S. Prikhodovski, K. J. Roschmann and C. R. Saha-Möller	2677	Oxidation of aryl-substituted allylic alcohols by an optically active Fe(III)(porph*) catalyst: enantioselectivity, diastereoselectivity and chemoselectivity in the epoxide versus enone formation
H.-L. Kwong, W.-L. Wong, W.-S. Lee, L.-S. Cheng and W.-T. Wong	2683	New chiral 2,2′:6′,2″-terpyridine ligands from the chiral pool: synthesis, crystal structure of a rhodium complex and uses in copper- and rhodium-catalyzed enantioselective cyclopropanation of styrene
T. Kato, T. Nakai, R. Ishikawa, A. Karasawa and T. Namai	2695	Preparation of the enantiomers of hydroxy-C18 fatty acids and their anti-rice blast fungus activities
A. Solladié-Cavallo, O. Sedy, M. Salisova, M. Biba, C. J. Welch, L. Nafié and T. Freedman	2703	A chiral 1,4-oxazin-2-one: asymmetric synthesis versus resolution, structure, conformation and VCD absolute configuration
G. Fantin, M. Fogagnolo, A. Guerrini, A. Medici, P. Pedrini and S. Fontana	2709	Enantioselective hydrolyses with *Yarrowia lipolytica*: a versatile strain for esters, enol esters, epoxides, and lactones
A. Arcadi, S. Di Giuseppe, F. Marinelli and E. Rossi	2715	Conversion of homochiral amines and α-amino esters to their chiral 1,2,3,5-substituted pyrrole derivatives via gold-catalysed amination/annulation reactions of 2-propynyl-1,3-dicarbonyl compounds
R. G. Kostyanovsky, V. Y. Torbeev and K. A. Lyssenko	2721	Spontaneous resolution of chiral cobalt(III) complexes
T. Tei, T. Sugimura, T. Katagiri, A. Tai and T. Okuyama	2727	Application of modified hydroxyl-directed diastereodifferentiating Simmons–Smith reaction to an unreactive conjugated triene. Stereocontrolled tandem cyclopropanation–Cope rearrangement–cyclopropanation
C. Fava, R. Galeazzi, G. Mobbili and M. Orena	2731	Steric constraints against [3,3]-sigmatropic rearrangement of allylic azides. A convenient approach to β-L-4-aminopent-2-eno*glycero*pyranosides
T. Konno, T. Daitoh, T. Ishihara and H. Yamanaka	2743	A novel and expedient synthesis of optically active fluoroalkylated amino acids via palladium-catalyzed allylic rearrangement and Ireland–Claisen rearrangement
I. Izquierdo, M. T. Plaza, R. Robles, A. J. Mota and F. Franco	2749	Highly stereocontrolled alkylation of protected 'diacetone hexulose aldehydes'
C. Bonini, L. Chiummiento and M. Funicello	2755	Preparation of chiral 1,3 skipped *anti*- and *syn*-tetrols via highly enantioselective biocatalytic resolution
A. Ghanem and V. Schurig	2761	Peracetylated β-cyclodextrin as additive in enzymatic reactions: enhanced reaction rate and enantiomeric ratio in lipase-catalyzed transesterifications in organic solvents
S. Immel, F. W. Lichtenthaler, H. J. Lindner and T. Nakagawa	2767	Hydroxymethyl-substituted crown acetals with 35-C-14 and 40-C-16 skeletal backbones: synthesis and molecular geometries
	A473	Stereochemistry abstracts
	I	Instructions to contributors
	V	Cumulative author index

NUMBER 20

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

A. Massa, A. Lattanzi, F. R. Siniscalchi and A. Scettri 2775 Catalytic enantioselective oxidation of sulfides to sulfoxides with a renewable hydroperoxide

A. Armstrong, W. O. Moss and J. R. Reeves 2779 Asymmetric epoxidation catalyzed by esters of α-hydroxy-8-oxabicyclo-[3.2.1]octan-3-one

ARTICLES

A. Trincone, E. Pagnotta, M. Rossi, M. Mazzone and M. Moracci 2783 Enzymatic synthesis of 2-deoxy-β-glucosides and stereochemistry of β-glycosidase from *Sulfolobus solfataricus* on glucal

K. Suzuki, M. Shoji, E. Kobayashi and K. Inomata 2789 Concise enantiodivergent synthesis of (+)- and (−)-*trans*-quercus lactones

T. Fukuda, A. Takehara and M. Iwao 2793 Palladium-catalyzed asymmetric allylic alkylation using iminophosphine ligands derived from chiral primary 1-ferrocenylalkylamines

J.-A. Ma, L.-X. Wang, W. Zhang and Q.-L. Zhou 2801 Synthesis of imine–amine type of chiral ligands and their application in the asymmetric cyclopropanation of olefins with diazoacetates

T. Kitayama, T. Masuda, Y. Kawai, R. K. Hill, M. Takatani, S. Sawada and T. Okamoto 2805 The chemistry of zerumbone. Part 3: Stereospecific creation of five stereogenic centers by double Sharpless oxidation

A. Iuliano, G. Masini, G. Félix and P. Salvadori 2811 Synthesis of deoxycholic-derived chiral stationary phases possessing both arylcarbamate and arylamide moieties: evaluation of their chiral discrimination properties in the HPLC resolution of racemic compounds

M. Diéguez, A. Ruiz and C. Claver 2827 Chiral furanoside phosphite–phosphoroamidites: new ligands for asymmetric catalytic hydroformylation

B. Jiang and Z. Chen 2835 Stereoselective synthesis of kurzilactone and determination of its absolute configuration

S. Dahmen and S. Bräse 2845 Preparation of planar chiral amino phenols based on the [2.2]paracyclophane backbone

I. Abrunhosa, M. Gulea, J. Levillain and S. Masson 2851 Synthesis of new chiral thiazoline-containing ligands

M. Diéguez, A. Ruiz and C. Claver 2861 New chiral amino-phosphite and phosphite-phosphoroamidite ligands for the copper-catalyzed asymmetric 1,4-addition of diethylzinc to cyclohexenone

C. Hegedüs, J. Madarász, H. Gulyás, Á. Szöllösy and J. Bakos 2867 One-pot synthesis of a novel C_1-symmetric diphosphine from 1,3-cyclic sulfate. Asymmetric hydroformylation of styrene

S. A. Popov, Y. V. Gatilov, T. V. Rybalova, O. A. Kholdeeva and A. V. Tkachev 2875 Novel optically active pyrazole ligands derived from (+)-3-carene

M. L. Heredia, E. de la Cuesta and C. Avendaño 2883 Cyclisation of (4*S*)-4-methyl-2-phenethyl-2,4-dihydro-(1*H*)-pyrazino[2,1-*b*]-quinazoline-3,6-dione derivatives via *N*-acyliminium ions

S. Wang, S. J. McClue, J. R. Ferguson, J. D. Hull, S. Stokes, S. Parsons, R. Westwood and P. M. Fischer 2891 Synthesis and configuration of the cyclin-dependent kinase inhibitor roscovitine and its enantiomer

M. Diéguez, A. Ruiz and C. Claver 2895 Chiral diphosphites derived from D-glucose in the copper-catalyzed conjugate addition of diethylzinc to cyclohexenone

M. C. Aversa, A. Barattucci, P. Bonaccorsi, G. Bruno, F. Caruso and P. Giannetto 2901 Enantiopure 2-sulfinylbuta-1,3-dienes in Diels–Alder cycloadditions: a stereoselective approach to an azasteroidal skeleton

P. Camps, E. Gómez, D. Muñoz-Torrero and M. Arnó 2909 On the regioselectivity of the Friedländer reaction leading to huprines: stereospecific acid-promoted isomerization of *syn*-huprines to their *anti*-regioisomers

A499 Stereochemistry abstracts

I Instructions to contributors

V Cumulative author index

NUMBER 21

Contents

v Contributors to this issue

vii Graphical abstracts

TETRAHEDRON: ASYMMETRY REPORT NUMBER 53

J. M. Seco, E. Quiñoá and R. Riguera 2915 A practical guide for the assignment of the absolute configuration of alcohols, amines and carboxylic acids by NMR

COMMUNICATIONS

K. Kinbara, Y. Tagawa and K. Saigo 2927 Probability of spontaneously resolvable conglomerates for racemic acid/racemic amine salts predicted on the basis of the results of diastereomeric resolutions

J. K. Park, S.-W. Kim, T. Hyeon and B. M. Kim 2931 Heterogeneous asymmetric Diels–Alder reactions using a copper–chiral bis(oxazoline) complex immobilized on mesoporous silica

A. Bayer and O. R. Gautun 2937 Highly enantioselective hetero Diels–Alder reactions of *N*-sulfinyl dienophiles promoted by copper(II)- and zinc(II)-chiral bis(oxazoline) complexes

S. D. Bull, S. G. Davies and A. D. Smith 2941 Asymmetric synthesis of a homochiral differentially protected pseudo-*meso* bis-β-amino acid scaffold

ARTICLES

M. B. Villecco, L. R. Hernández, M. I. Guzmán, C. A. N. Catalán, M. A. Bucio and P. Joseph-Nathan 2947 Synthesis, stereochemistry and absolute configuration of deodarols and deodarones

B. W. Gung and X. Xue 2955 Asymmetric transition states of allylation reaction: an ab initio molecular orbital study

F. Orsini, G. Sello and G. Bestetti 2961 Enantiopure *vic*-amino alcohols and *vic*-diamines from (1*R*,2*S*)-1,2-dihydroxy-1,2-dihydronaphthalene

J.-S. You, M.-Y. Shao and H.-M. Gau 2971 Enantioselective addition of diethylzinc to aldehydes catalyzed by titanium(IV) complexes of *N*-sulfonylated amino alcohols with two stereogenic centers

A. E. Wróblewski and D. G. Piotrowska 2977 Stereochemistry of the addition of dialkyl phosphites to (*S*)-*N*,*N*-dibenzylphenylglycinal

S. P. Chavan, R. K. Kharul, A. K. Sharma and S. P. Chavan 2985 An efficient and simple synthesis of (−)-wine lactone

Y. Tsuzuki, K. Chiba, K. Mizuno, K. Tomita and K. Suzuki 2989 Practical synthesis of (3*S*,4*S*)-3-methoxy-4-methylaminopyrrolidine

J. Uenishi and M. Hamada 2999 Preparation of new chiral pyridine–phosphine ligands and their Pd-catalyzed asymmetric allylic alkylations

Y. Kawai, M. Hayashi and N. Tokitoh 3007 Asymmetric synthesis of α-chiral ketones by the reduction of enones with baker's yeast

X. Yuan, J. Li, Y. Tian, G.-H. Lee, X.-M. Peng, R. Zhu and X. You — 3015 Efficient resolution of naproxen by inclusion crystallization with *N*-octylglucamine and structure characterization of the inclusion complex

F. L. Buenadicha, C. Avendaño and M. Söllhuber — 3019 Reactivity as glycine templates of 1,2-dialkyl-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-diones

L. Flores-Santos, E. Martin, M. Diéguez, A. M. Masdeu-Bultó and C. Claver — 3029 Novel chiral dithioethers derived from L-tartaric acid

P. Holý, J. Závada, I. Císařová and J. Podlaha — 3035 Self-assembly of enantiopure and racemic 2,2′,6,6′-tetrasubstituted biaryl tectons into hydrogen bonded chiral squares and infinite chiral square layers

E. García-Urdiales, F. Rebolledo and V. Gotor — 3047 Study of the enantioselectivity of the CAL-B-catalysed transesterification of α-substituted α-propylmethanols and α-substituted benzyl alcohols

M. Tiecco, L. Testaferri, F. Marini, S. Sternativo, C. Santi, L. Bagnoli and A. Temperini — 3053 Optically active isoxazolidines and 1,3-amino alcohols by asymmetric selenocyclization reactions of *O*-allyl oximes

3061 Corrigendum

A521 Stereochemistry abstracts

I Instructions to contributors

V Cumulative author index

NUMBER 22

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

Y. Leblanc, C. Dufresne, R. Carson, L. Morency and C. J. Welch — 3063 Enhanced chromatographic resolution of alcohol enantiomers as phosphate or phosphonate derivatives

K. Hiroi and K. Watanabe — 3067 Palladium-catalyzed asymmetric Diels–Alder reactions with novel chiral imino-phosphine ligands

S. N. Joshi, V. G. Puranik, A. R. A. S. Deshmukh and B. M. Bhawal — 3073 Diastereospecific synthesis of novel tetracyclic β-lactams via 6-*exo*-*trig* radical cyclization

F. Busqué, P. de March, M. Figueredo, J. Font and S. Rodríguez — 3077 From *p*-benzoquinone to useful chiral cyclohexane building blocks

ARTICLES

P. Jiao, J. Xu, Q. Zhang, M. C. K. Choi and A. S. C. Chan — 3081 Synthesis of novel C_2-symmetric and enantiomerically pure bisbenzoxazoles and bisbenzothiazoles derived from L- and D-tartaric acids

M. von Arx, T. Mallat and A. Baiker — 3089 Platinum-catalyzed enantioselective hydrogenation of aryl-substituted trifluoroacetophenones

F. Martínez-Ramos, M. E. Vargas-Díaz, L. Chacón-García, J. Tamariz, P. Joseph-Nathan and L. G. Zepeda — 3095 Highly diastereoselective nucleophilic additions using a novel myrtenal-derived oxathiane as a chiral auxiliary

M. Shi, C.-J. Wang and A. S. C. Chan — 3105 Axially dissymmetric binaphthyldiimine chiral salen-type ligands for copper-catalyzed asymmetric aziridination

M. Yamauchi, T. Aoki, M.-Z. Li and Y. Honda — 3113 Reactivity of 2-methylene-1,3-dicarbonyl compounds: catalytic enantioselective Diels–Alder reaction

K. Velonia and I. Smonou — 3119 Stereospecificity of hydride transfer during the dismutation of aldehydes catalyzed by alcohol dehydrogenases

F. Zsila, Z. Bikádi and M. Simonyi 3125 Induced chirality upon crocetin binding to human serum albumin: origin and nature

R. Żurawiński, K. Nakamura, J. Drabowicz, P. Kiełbasiński and M. Mikołajczyk 3139 Biocatalytic syntheses of chiral non-racemic 2-hydroxyalkanephosphonates

K. Nakamura, M. Fujii and Y. Ida 3147 Stereoinversion of arylethanols by *Geotrichum candidum*

F. Badalassi, P. Crotti, C. Di Bugno, F. D'Arata, L. Favero and A. Ramacciotti 3155 Efficient enantioselective synthesis of (*R*)-2-acetyl-2-hydroxy-5,8-dimethoxy-1,2,3,4-tetrahydronaphthalene, the key intermediate in the synthesis of anthracycline antibiotics

D. Socha, M. Jurczak, J. Frelek, A. Klimek, J. Rabiczko, Z. Urbańczyk-Lipkowska, K. Suwińska, M. Chmielewski, F. Cardona, A. Goti and A. Brandi 3163 1,3-Dipolar cycloaddition of a nitrone derived from (*S*)-malic acid to α,β-unsaturated δ-lactones

H. Acherki, C. Alvarez-Ibarra, A. de Dios, M. Gutiérrez and M. L. Quiroga 3173 Diastereoselective synthesis of 4-substituted 5-(*p*-tolylsulfinyl)-5,6-dehydropiperidin-2-ones. A new approach to methyl L-(2*S*,4*S*)-4-methyl-6-oxopipecolate

M. Miyazawa and Y. Hashimoto 3185 Microbial resolution of racemic 2-*endo*-acetoxy-1,8-cineole by *Glomerella cingulata*

J. M. Vega-Pérez, M. Vega, E. Blanco and F. Iglesias-Guerra 3189 Stereoselective synthesis of oxiranes using oxazolidines derived from 2-amino-2-deoxy-D-allose as chiral auxiliaries

B. Ortner, H. Hübner and P. Gmeiner 3205 Planar chiral indoles: synthesis and biological effects of the enantiomers

A547 Stereochemistry abstracts

I Instructions to contributors

V Cumulative author index

NUMBER 23

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

E. Vázquez, A. Galindo, D. Gnecco, S. Bernès, J. L. Terán and R. G. Enríquez 3209 Unexpected retro-Michael reaction of (−)-(1′*S*,4a*S*,8a*R*)- and (+)-(1′*S*,4a*R*,8a*S*)-4a-ethyl-1-(1-phenylethyl)octahydroquinolin-7-ones

X.-C. He, B. Wang, G. Yu and D. Bai 3213 Studies on the asymmetric synthesis of huperzine A. Part 2: Highly enantioselective palladium-catalyzed bicycloannulation of the β-keto-ester using new chiral ferrocenylphosphine ligands

ARTICLES

Y.-M. Lin, I-P. Fu and B.-J. Uang 3217 Enantioselective borane reduction of aromatic ketones using chiral BINOL derivatives as ligands in an aluminum catalyst

J. S. Yadav and S. Nanda 3223 Novel chiral lipoxygenase substrates: design and synthesis. Part 2

A. Fujii, Y. Fujima, H. Harada, M. Ikunaka, T. Inoue, S. Kato and K. Matsuyama 3235 A scalable synthesis of (*R*)-3-(2-aminopropyl)-7-benzyloxyindole via resolution

F. Felluga, G. Pitacco, M. Prodan, S. Pricl, M. Visintin and E. Valentin 3241 A chemoenzymatic approach to the synthesis of enantiomerically pure aza analogues of paraconic acid methyl ester and both enantiomers of methyl β-proline

A. Sobolev, M. C. R. Franssen, B. Vigante, B. Cekavicus, N. Makarova, G. Duburs and A. de Groot 3251 An efficient chemoenzymatic approach to enantiomerically pure 4-[2-(difluoromethoxy)phenyl] substituted 1,4-dihydropyridine-3,5-dicarboxylates

A. J. Moreno-Vargas, J. G. Fernández-Bolaños, J. Fuentes and I. Robina 3257 Reactivity of polyhydroxyalkyl-heterocycles towards Lewis acids

M. I. Youshko, F. van Rantwijk and R. A. Sheldon 3267 Enantioselective acylation of chiral amines catalysed by aminoacylase I

P. Chen, S. Han, G. Lin, H. Huang and Z. Li 3273 A study of asymmetric hydrocyanation of heteroaryl carboxaldehydes catalyzed by (*R*)-oxynitrilase under micro-aqueous conditions

J. I. Candela Lena, M. del R. Rico Ferreira, J. I. Martin Hernando and S. Arseniyadis 3281 A practical access into conveniently functionalized, homochiral C-ring system of taxuyunnanine C

Y. Usuki, H. Hirakawa, K. Goto and H. Iio 3293 Asymmetric synthesis of isohaliclorensin, a key intermediate of bisquinolinylpyrrole alkaloid halitulin

M. Tiecco, L. Testaferri, L. Bagnoli, V. Purgatorio, A. Temperini, F. Marini and C. Santi 3297 Efficient asymmetric selenocyclizations of alkenyl oximes into cyclic nitrones and 1,2-oxazines promoted by sulfur containing diselenides

Z.-L. Wu and Z.-Y. Li 3305 Enantioselective hydrolysis of various racemic α-substituted arylacetonitriles using *Rhodococcus* sp. CGMCC 0497

G. Delogu, D. Fabbri, M. A. Dettori, G. Capozzi, S. Menichetti and C. Nativi 3313 Desymmetrization of 2,2′,6,6′-tetramethoxybiphenyl by regioselective sulfenylation reaction

F. Paradisi, G. Porzi and S. Sandri 3319 A new stereocontrolled synthesis of uncommon tripeptides derived from 2,6-diaminopimelic acid (2,6-DAP)

A579 Stereochemistry abstracts

I Instructions to contributors

V Cumulative author index

NUMBER 24

Contents

v Contributors to this issue

vii Graphical abstracts

COMMUNICATIONS

A. García Martínez, E. Teso Vilar, A. García Fraile, S. de la Moya Cerero and B. Lora Maroto 3325 A novel enantiospecific route to 10-hydroxyfenchone: a convenient intermediate for C(10)-*O*-substituted fenchones

P. Wyatt 3329 Separation of diol enantiomers—a remarkable influence of water

ARTICLES

M. Putala, N. Kastner-Pustet and A. Mannschreck 3333 Diastereoselective reaction of (*MP*)-pentahelicene-7,8-dione with *trans*-cyclohexane-1,2-diamine. Thermal and photochemical transformations of its product

J. Goswami, R. L. Bezbaruah, A. Goswami and N. Borthakur 3343 A convenient stereoselective synthesis of (*R*)-(−)-denopamine and (*R*)-(−)-salmeterol

J. Aires-de-Sousa, S. Prabhakar, A. M. Lobo, A. M. Rosa, M. J. S. Gomes, M. C. Corvo, D. J. Williams and A. J. P. White	3349	Asymmetric synthesis of *N*-aryl aziridines
M.-X. Wang, C.-S. Liu and J.-S. Li	3367	Enzymatic desymmetrization of 3-alkyl- and 3-arylglutaronitriles, a simple and convenient approach to optically active 4-amino-3-phenylbutanoic acids
A. Patti, M. Lotz and P. Knochel	3375	Synthesis of α,β-disubstituted ferrocenes via a ferrocenylepoxide intermediate. Preparation and catalytic activity of a new chiral ferrocenyloxazoline
J. S. Yadav, P. T. Reddy, S. Nanda and A. B. Rao	3381	Stereoselective synthesis of (*R*)-(−)-denopamine, (*R*)-(−)-tembamide and (*R*)-(−)-aegeline via asymmetric reduction of azidoketones by *Daucus carota* in aqueous medium
F. Hernández, F. L. Buenadicha, C. Avendaño and M. Söllhuber	3387	1-Alkyl-2,4-dihydro-1*H*-pyrazino[2,1-*b*]quinazoline-3,6-diones as glycine templates. Synthesis of Fiscalin B
A. Bierstedt, J. Stölting, R. Fröhlich and P. Metz	3399	Enzymatic kinetic resolution of 1-(3′-furyl)-3-buten-1-ol and 2-(2′-furyl)-propan-1-ol
R. Kumareswaran and A. Hassner	3409	Asymmetric synthesis of 1,4-dideoxy-1,4-imino-D-ribitol via stereoselective addition of allylphenylsulfone to an aryl *N*-sulfinylimine
J. Bálint, G. Egri, I. Markovits, M. Czugler, K. Marthi, Á. Demeter, K. Temesvári-Takács and E. Fogassy	3417	Synthesis of some tolperisone metabolites in racemic and optically active form
É. Bozó, Á. Demeter, A. Rill and J. Kuszmann	3423	The behavior of two thiosugar thioglycosides towards oxidation
J. Bálint, G. Egri, V. Kiss, A. Gajáry, Z. Juvancz and E. Fogassy	3435	Unusual phenomena during the resolution of 6-fluoro-2-methyl-1,2,3,4-tetrahydroquinoline (FTHQ): thermodynamic-kinetic control
O. Pàmies, G. Net, A. Ruiz and C. Claver	3441	Asymmetric hydroformylation of styrene catalyzed by furanoside phosphine–phosphite–Rh(I) complexes
M. Santos, M. A. Sanz-Tejedor, J. F. Rodriguez-Amo, Y. Arroyo and J. A. López-Sastre	3447	Use of enantiomerically pure methylsulfinylmethylisoxazolines in the stereoselective synthesis of 1,5,6,7-tetrahydroxy-3-heptanone derivatives
G. Buono	3457	Letter to the editor regarding: "New development in the enantioselective ring opening of *meso*-epoxides by various chloride ion silicon sources catalyzed by an *o*-methoxyaryldiazaphosphonamide Lewis base": [Tetrahedron: *Asymmetry* 11 (2000) 4441–4445]
	A609	Stereochemistry abstracts
	I	Instructions to contributors
	V	Author index and volume contents 2001